



Locality Plan



Gregory Hills Corporate Park

Gregory Hills Corporate Park
SOMA Lifestyle

Development Application Drawings

MMD-369626-C-DR-CB-DA-0001 P3
Date: 25.10.17

Drawing List Table

Drawing Number	Drawing Title
Arrangement and Overview Plans - 0100	
0101	Cover Sheet
0102	Drawing Index
0103	Notes Sheet
0104	Notes and Legends Sheet
0105	Boundary Layout Plan
0106	General Arrangement Plan
0107	Drawing Sheet Key Plan
0110	Site Sections
Bulk Earthworks - 0200	
0201	Bulk Earthworks Plan Sheet 1
0202	Bulk Earthworks Plan Sheet 2
Erosion Control Plans - 0300	
0301	Concept Soil and Water Management Plan Sheet 1
0302	Concept Soil and Water Management Plan Sheet 2
0310	Concept Soil and Water Management Details Sheet
Siteworks Plans - 0400	
0401	Siteworks Plan Sheet 1
0402	Siteworks Plan Sheet 2
0403	Siteworks Plan Sheet 3
0404	Siteworks Plan Sheet 4
0405	Siteworks Plan Sheet 5
0406	Siteworks Plan Sheet 6
0407	Siteworks Plan Sheet 7
0408	Siteworks Plan Sheet 8
0409	Siteworks Plan Sheet 9
0410	Siteworks Details Sheet 1
0411	Siteworks Details Sheet 2
Linemarking and Signposting Plans - 500	
0501	Linemarking and Signposting Plan Sheet 1
0502	Linemarking and Signposting Plan Sheet 2
Road Longsections - 0600	
0601	Road Longitudinal Section Sheet 1
0602	Road Longitudinal Section Sheet 2
0603	Road Longitudinal Section Sheet 3
0604	Road Longitudinal Section Sheet 4
Stormwater Drainage Details - 0700	
0701	Stormwater Longitudinal Section Sheet 1
0702	Stormwater Longitudinal Section Sheet 2
0703	Stormwater Longitudinal Section Sheet 3
0704	Stormwater Longitudinal Section Sheet 4
0705	Stormwater Longitudinal Section Sheet 5
0706	Stormwater Longitudinal Section Sheet 6
0707	Stormwater Longitudinal Section Sheet 7
0710	Stormwater Drainage Details Sheet 1
0711	Stormwater Drainage Details Sheet 2
0720	Stormwater Catchment Plan
0750	Stormwater OSD Tank Plan and Details sheet 1
0751	Stormwater OSD Tank Plan and Details sheet 2
0752	Stormwater OSD Tank Plan and Details sheet 3
Turning Path Plans - 0800	
0801	Turning Path Plan Sheet 1
0802	Turning Path Plan Sheet 2
0803	Turning Path Plan Sheet 3
Proposed Services Plans - 0900	
0901	Concept Servicing Strategy

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Preliminary - Not For Construction

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P4	25.10.17	GAP	Re-Issued for DA - Revised Layout	SR	JG				Drawn	A.Paciben		Coordination	S. Reilly			
P3	07.07.17	PDC	Issued for Development Application	SR	JG				Dwg check	A.Singh		Approved	J.Gilligan			
P2	16.12.16	MMc	Issued for Development Application	SR	JG				Scale at A1	N/A	Status	PRE	Rev	P4	Security	STD
P1	15.12.16	MMc	Issued for Client Review	SR	-				Drawing Number						MMD-369626-C-DR-CB-DA-0102	
Rev	Date	Drawn	Description	Ch'k'd	App'd											

Camden Council General Notes					
CCGN1	All work to be carried out in accordance with Camden Council's Engineering Design and Engineering Construction Specifications and to the requirements of the Certifying Authority.				
CCGN2	Inspections by Certifying Authority are required at the following stages and the works approved prior to continuance of any future work: (a) Following installation of erosion and sediment control structures/measures. (b) Prior to backfilling pipelines, subsoil drains and dams. (c) Prior to casting of pits and other concrete structures, including kerb and gutter but following placement of footings, formwork, and reinforcement. (d) Prior to placement of sub base and all subsequent pavement layers, a proof roller test of each pavement layer is required. (e) Formworks prior to pouring concrete in parking area for footpath crossing and other associated work. (f) Prior to backfilling public utility crossings in road reserves. (g) Final inspections after all works are completed and 'works as executed' plans have been submitted to Council.				
CCGN3	No trees are to be removed unless approval is granted by Council's Landscape Compliance Officer or as authorised by development consent.				
CCGN4	Make smooth junctions with existing works.				
CCGN5	No work is to be carried out on Council property or adjoining properties without the written permission from the owner/s.				
CCGN6	Vehicular access and all utilities/services are to be maintained at all times to adjoining properties affected by construction.				
CCGN7	All rubbish, buildings, sheds and fences to be removed to satisfaction of Council's Engineer.				
CCGN8	Council Engineers have discretion to vary, as considered necessary, the engineering requirements in respect of a particular subdivision or development having regard to the site context.				

Camden Council Earthworks Notes

CCEN1	Earthworks are to be carried out to the satisfaction of the Council. Unsuitable materials are to be removed from roads and lots prior to filling. The Contractor is to arrange and make available compaction testing results for all areas that contain fill in excess of 200 mm.
CCEN2	Compaction of earthworks shall continue until a dry density ratio of 95% for site filling and 100% for road pavement subgrades has been achieved in accordance with test method AS1289.5.3.1 or AS.1289.5.1.1. The control testing of earthworks shall be in accordance with the guidelines in AS3798 'Guidelines on Earthworks for Commercial and Residential Developments'. Where it is proposed to use test method AS1289.5.8.1 to determine the field density, a sand replacement method shall be used to confirm the results.
CCEN3	The suitable qualified Geotechnical Engineer, shall have a level 1 responsibility for all filling as defined in Appendix B AS3798 'Guidelines on Earthworks for Commercial and Residential Developments', and at the end of the works shall confirm the earthworks comply with the requirements of the specification and drawings by written notification.
CCEN4	In areas to be filled where the slope of the natural surface exceeds 1(V):4(H), benches are to be cut to prevent slipping of the placed fill material as required by the Council.
CCEN5	All batters are to be scarified to a depth of 50 mm to assist with adhesion of top soil to batter face.
CCEN6	Provide minimum 150 mm and maximum 300 mm topsoil with on footpaths, filled areas and all other areas disturbed during construction. Topsoiled areas to be stabilised with approved vegetation a maximum of 14 days after topsoiling and are to be watered to ensure germination.
CCEN7	The Contractor shall control sedimentation, erosion and pollution during construction in accordance with the requirements of the current edition of 'Managing Urban Stormwater: Soils and Construction' produced by Landcom.
CCEN8	A minimum 1 metre wide, continuous strip of couch grass shall be placed behind the back of all kerbs and other concrete structures immediately after the completion of the footpath grading or other elements as applicable, and shall be maintained and replaced as required during the construction maintenance period.

Camden Council Stormwater Notes

CCSN1	All pipes to be spigot and socket, rubber ring jointed.
CCSN2	All longitudinal pipelines in roads must be located under kerb and gutter and be backfilled with approved granular material unless otherwise approved by the Council Engineer.
CCSN3	Drainage lines must be backfilled with approved granular material in trafficable areas. Three (3) metres of subsoil drainage wrapped in geotextile stocking must be provided to all downstream pits.
CCSN4	All gully pits to Council's standard and lintels centrally placed at sag pits.
CCSN5	All pits must be benched and streamlined. Provide SL72 reinforcement and galvanised step irons in all pits over 1.2-metres deep as measured from the top of grate to the invert of the pit.
CCSN6	Concrete is to have minimum compressive strength of 32MPa at 28-days unless otherwise approved by the Council Engineer.
CCSN7	All interallotment drainage must have a minimum pipe diameter of 150 mm and a minimum grade of 1% unless otherwise approved by the Council Engineer.
CCSN8	All interallotment drainage lines must be laid centrally within drainage easements. Inspection pits must be provided at all changes of grade and direction.
CCSN9	Interallotment drainage lines must be installed after Sydney Water sewerage lines have been installed where sewer is proposed adjacent to interallotment drainage lines.
CCSN10	1% AEP overland flow paths must be formed and shown on 'works as executed' drawings.
CCSN11	All plans (both design and WAE) are to clearly delineate the extent/location of flood lines including the 5% AEP, 1% AEP and PMF.
CCSN12	Adequate provision is to be made to prevent scouring and sedimentation for all drainage works in accordance with Council's requirements.
CCSN13	Pit Lintels are to be stencilled with applicable distinction stencil available from Council.
CCSN14	Catch drains must be constructed as required by the approved plans or the Principal Certifying Authority.
CCSN15	Soil and Water Management Plans are to be prepared for all disturbed sites and adhered to at all times during the construction and maintenance periods.

General Notes

GN1	All workmanship and materials shall comply with the National Construction Code of Australia and the relevant current Australian Standards.
GN2	Any discrepancies, omissions or errors shall be reported to the Superintendent for clarification before proceeding with the work.
GN3	Do NOT scale measurements from the drawings.
GN4	Where notes conflict preference shall be given to Camden Council notes

Siteworks Notes

SN1	Datum : Australian Height Datum (AHD) Origin of levels : PM 168901, RL97.81 Origin of co-ordinates : Mapping Grid Of Australia (MGA) Survey prepared by : Burton & Field 343 Hume Highway, Liverpool 2170 Tel: (02) 9602-1199 Fax (02) 9821-2620
SN2	The contractor must verify all dimensions and existing levels on site prior to commencement of work, and report any discrepancies to the superintendent.
SN3	All existing services (including any not shown on the plans) must be accurately located in position and level prior to any excavation. Any discrepancies shall be reported to the superintendent. minimum service clearances shall be maintained from the relevant service authority.
SN4	The contractor shall arrange for all setting out by a registered surveyor.
SN5	The contractor shall obtain all regulatory authority approvals at their own expense.
SN6	Where new works about existing, the contractor must ensure that a smooth and even profile, free from abrupt changes is obtained.
SN7	All disturbed areas shall be restored to their original condition, unless specified otherwise.
SN8	Excavated trenches shall be compacted to the same density as the adjacent natural material. Any subsidence's during the period to be rectified as directed by the superintendent.
SN9	Any existing trees which form part of the final landscaping plan will be protected from construction activities in accordance with the landscape architect's details and / or by - Protecting them with barrier fencing or similar materials installed outside the drip line, ensuring that nothing is nailed to them, prohibiting paving, grading, sediment wash or placing of stockpiles within the drip line except under the following conditions - Encroachment only occurs on one side and no closer to the trunk than either 1.5m or half the distance between the outer edge of the drip line and the trunk, which ever is the greater, a drainage system that allows air and water to circulate through the root zone (eg a gravel bed) is placed under all fill layers of more than 300mm care is taken not to cut roots unnecessarily nor to compact the soil around them.
SN10	Receptors for concrete and mortar slurries, paints, acid washings, light-weight waste materials and litter are to be emptied as necessary. Disposal of waste shall be in a manner approved by the superintendent or as specified in the works contract.

Existing Services Notes

ES1	Existing services have been plotted from supplied data and as such their accuracy cannot be guaranteed. It is the responsibility of the contractor to establish the location and level of all existing services prior to the commencement of any work. Any discrepancies shall be reported to the superintendent.
ES2	The contractor shall allow for the capping off, excavation and removal if required of all redundant existing services in areas affected by works within the contract area, as shown on the drawings unless directed otherwise by the superintendent.
ES3	The contractor shall ensure that at all times services to all buildings not affected by the works are not disrupted.
ES4	If required, the contractor shall construct temporary services to maintain existing supply to buildings remaining in operation during works to the satisfaction and approval of the superintendent. Once diversion is complete and commissioned the contractor shall remove all such temporary services and make good to the satisfaction of the superintendent and the relevant service authority.
ES5	Interruption to supply of existing services shall be done so as not to cause any inconvenience to the principal. The contractor is to gain approval from the superintendent for time of interruption - the contractor is responsible for all liaison.
ES6	All branch gas and water services under driveways and brick paving shall be located in Ø80mm uPVC sewer grade conduits extending a minimum of 500mm beyond the edge of paving.
ES7	Clearance and cover requirements shall be obtained from the relevant service authority before commencement of works and shall be adhered to at all times.
ES8	Care is to be taken when excavating near existing services. No mechanical excavations are to be undertaken over telecom or electrical services. Hand excavate in these areas only.

Earthworks Notes

EW1	All work shall comply with AS3798 (2007) - Guidelines on earthworks for commercial and residential developments.										
EW2	All work shall comply with the project geotechnical report										
EW3	Strip topsoil to expose naturally occurring engineering material and stockpile on site for reuse as directed by the superintendent.										
EW4	All soft, wet or unsuitable material to be removed as directed by the superintendent and replaced with approved fill material.										
EW5	All fill material shall be from a source approved by the superintendent and shall comply with the following - a) free from organic and perishable matter, b) maximum particle size 75mm, c) plasticity index - between 2% and 15%.										
EW6	All fill material shall be placed in maximum 200mm thick layers and compacted at optimum moisture content (+ or - 2%) to achieve a dry density determined in accordance with AS1289.5.1.1 - 2003 - methods of testing soils for engineering purposes of not less than the following standard minimum dry density - <table><tr><th>location</th><th>standard dry density</th></tr><tr><td>under building slabs</td><td>98%</td></tr><tr><td>vehicular paved areas</td><td>100%</td></tr><tr><td>non-vehicular paved areas</td><td>98%</td></tr><tr><td>landscaped areas</td><td>95%</td></tr></table>	location	standard dry density	under building slabs	98%	vehicular paved areas	100%	non-vehicular paved areas	98%	landscaped areas	95%
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non-vehicular paved areas	98%										
landscaped areas	95%										
EW7	The contractor shall program the earthworks operation so that the working areas are adequately drained during the period of construction. The surface shall be graded and sealed off to remove depressions, roller marks and similar which would allow water to pond and penetrate the underlying material. any damage resulting from the contractor not observing these requirements shall be rectified by the contractor at their own expense.										
EW8	Testing of the fill material shall be carried out by an approved NATA registered laboratory at the contractors expense.										
EW9	Where the subgrade is unable to support construction equipment, or it is not possible to compact overlying pavement layers, only because of the subgrade moisture content, then the contractor shall condition or replace the material at the contractors discretion and expense.										
EW10	Earthworks calculations are volumetric only and do not allow for bulking of excavated material. It is the contractors responsibility to make allowances for these items as part of the tender / works.										
EW11	No allowance has been made for footings or foundations, retaining walls or trenching. It is the contractors responsibility to make allowances for these items as part of the tender / works.										

Stormwater Notes

SW1	For commercial or industrial sites - All Ø300mm to Ø600mm drainage pipes shall be class 4 approved spigot and socket reinforced concrete pipes with rubber ring joints (UNO). All Ø675mm or larger drainage pipes shall be class 3 approved spigot and socket reinforced concrete pipes with rubber ring joints (UNO). All drainage pipes less than or equal to Ø225mm shall be uPVC DWV grade class SN8 in accordance with AS/NZS 1260 : 2009 - PVC-u pipes and fittings for drain, waste and vent application with solvent welded joints. SW2 Equivalent strength fibrous reinforced concrete (F.R.C.) may be used subject to approval by the superintendent. SW3 All pipe junctions up to and including Ø450mm and tapers, shall be via purpose made fittings (UNO). SW4 Minimum grade to stormwater lines to be 1% (UNO). SW5 Contractor to supply and install all fittings and specials including various pipe adaptors to ensure proper connection between dissimilar pipework. SW6 All connections to existing drainage pits shall be made in a tradesman-like manner and the internal wall of the pit at the point of entry shall be cement rendered to ensure a smooth finish with no protrusions. SW7 All in-situ concrete pits to be 32Mpa minimum at 28 days. SW8 Pits and pipes in areas of salinity hazard shall have increased cover to any reinforcement. SW9 Pits deeper than 1000mm shall have step irons installed in accordance with the local or statutory authority requirements. SW10 Bedding shall be type H2 (UNO) for pipes not under pavements, and type HS2 for pipes under pavements in accordance with AS/NZS 3725 : 2007 - design for installation of buried concrete pipes. SW11 Backfill trench with sand or approved granular backfill to 300mm (min) above the pipe. Where the pipe is under pavements backfill remainder of trench to pavement subgrade with sand or approved gravel sub-base compacted in 150mm layers to 98% standard maximum dry density. The contractor is to ensure compaction equipment is appropriate for the pipe class used. SW12 Where stormwater lines pass under floor slabs DWV grade uPVC rubber ring joints are to be used (UNO). SW13 Where subsoil drainage lines pass under floor slabs and vehicular pavements, unslopped uPVC DWV grade class SN8 pipe shall be used. SW14 Provide 3m length of Ø100mm subsoil drainage line or 200 'Nylux' strip drain surrounded with 150mm of 20mm blue metal or gravel, and wrapped in 'Bidum' A24 geotextile filter fabric or approved equivalent, at invert of incoming upstream pipe on each pit.
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Asphaltic Concrete Notes

<u>General</u>											
AC1	Asphaltic concrete mix design, manufacture, placing and compaction shall be in accordance with RMS Specification R116-Asphalt (dense graded and open graded) and AS2150-2005 - Hot Mix Asphalt - A Guide To Good Practice. Annexure R116/1 to be completed by subcontractor and submitted for approval by superintendent 7 days prior to AC works.										
AC2	Mineral filler to comply with AS2150 - 2005 - Hot Mix Asphalt - A Guide to Good Practice.										
<u>Mix proportions</u>											
AC3	Job mix - 7mm nominal size aggregate. Minimum bitumen content (%) by (mass of total mass) - 5.1%.										
AC4	Mix stability - between 16kn and 36kn as determined by RMS test method T601 - Compaction of test specimens of dense grade bituminous mixtures and T603 - Stability of dense grade bituminous mixtures.										
AC5	Air voids in compacted mix - between 4% of volume and 7% of the mix. Voids filled in binder. 65-80% of air voids in the total mineral aggregate filled by binder in accordance with RMS test method T601 - Compaction of test specimens of dense grade bituminous mixtures, T605 - Maximum density of bituminous plant mix and T606 - Bulk density of compacted dense graded bituminous mixtures.										
<u>Pavement preparation</u>											
AC6	The existing surface to be sealed, shall be dry and broomed before commencement of work to ensure complete removal of all superficial foreign and loose matter.										
AC7	All depressions or uneven areas are to be tack-coated and brought up to general level of pavement with asphaltic concrete before laying of main course.										
<u>Tack coat</u>											
AC8	The whole of the area to be sheeted with asphaltic concrete shall be lightly and evenly coated with rapid setting bitumen. Application rate for residual bitumen shall be 0.15 to 0.30 litres/square metre. Application shall be by means of a mechanical sprayer with spray bar.										
<u>Spreading</u>											
AC9	All asphaltic concrete shall be spread with a self propelled paving machine.										
AC10	The asphaltic concrete shall be laid at a mix temperature as shown below -										
	<table><tr><th>road surface temp in shade (°c)</th><th>mix temperatures (°c)</th></tr><tr><td>5 - 10</td><td>not permitted</td></tr><tr><td>10 - 15</td><td>150</td></tr><tr><td>15 - 25</td><td>145</td></tr><tr><td>25+</td><td>140</td></tr></table>	road surface temp in shade (°c)	mix temperatures (°c)	5 - 10	not permitted	10 - 15	150	15 - 25	145	25+	140
road surface temp in shade (°c)	mix temperatures (°c)										
5 - 10	not permitted										
10 - 15	150										
15 - 25	145										
25+	140										
AC11	Asphaltic concrete shall not be laid when the road surface is wet or when cold winds chill the mix to adversely affect temperature of mix during spreading and compaction operations.										
AC12	The minimum compacted thickness is 50mm in two (2) layers.										
<u>Joints</u>											
AC13	The number of joints both longitudinal and transverse shall be kept to a minimum.										
AC14	The density and surface finish at joints shall be similar to those of the remainder of the layer.										
<u>Compaction</u>											
AC15	All compaction shall be undertaken using self propelled rollers.										
AC16	Initial rolling shall be completed before the mix temperature falls below 105°c.										
AC17	Secondary rolling shall be completed before the mix temperature falls below 60°c.										
AC18	Minimum characteristic value of relative compaction of a lot when tested in accordance with AS2150 - 2005 - Hot mix asphalt - a guide to good practice shall be 95%.										
<u>Finished pavement properties</u>											
AC19	Finished surfaces shall be smooth, dense and true to shape and shall not vary more than 10mm from the specified plan level at any point and shall not deviate from the bottom of a 3m straight edge laid in any direction by more than 5mm.										

P3	25.10.17	GAP	Re-Issued for DA - Revised Layout	SR	JG
P2	16.12.16	MMc	Issued for Development Application	SR	JG
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Client

Gregory Hills
Corprorate Park

Title

SOMA Lifestyle
Development Application

Notes Sheet

Designed	P.Cavanagh	Eng check	S. Reilly	
Drawn	M. Mcrae	Coordination	S. Reilly	
Dwg check	A.Singh	Approved	J.Gilligan	
Scale at A1	Status	Rev	Security	
N/A	PRE	P3	STD	
Drawing Number MMD-369626-C-DR-CB-DA-0103				

Bitumen Sealing Notes

Pavement Preparation

- BS1 The surface to be sealed shall be dry and broomed before commencement of work to ensure complete removal of all superficial, foreign and loose matter.
- BS2 If approved by the superintendent, all depressions or uneven areas are to be tack-coated and brought to general level of pavement with asphaltic concrete before sealing commences.

Material

- BS3 Binder shall be class 170 to AS2008 -1997 - Residual Bitumen for Pavements, or approved proprietary material for priming and prime-sealing.
- BS4 Aggregate shape, durability and wet to dry strength shall comply to AS2758.2 - 2009 - Aggregates and rock for Engineering Purposes for Class "N" Aggregates.
- BS5 A 20kg sample of aggregate proposed for use shall be approved by the superintendent prior to use.

- BS6 Aggregates shall be delivered uniformly pre-coated, excessive or uneven pre-coating may result in aggregates being rejected.

- BS7 For two coat flush seals, the size of the aggregate for the second coat, while normally half that of the first coat, shall be dimensionally compatible with that of the first coat.

- BS8 Pre-coating agents shall be compatible with the aggregates and binder to be used.

Design

- BS9 Design of sprayed bituminous seals shall be carried out in accordance with the Austroads (NAASRA) publication, "Principles and Practice of Bituminous Surfacing, Volume 1 - Sprayed Work".

- BS10 Where not indicated on the drawings, primers and primer-seals shall be designed to remain intact until final sealing takes place, having regard for the traffic and climatic conditions pertaining.

- BS11 Unless otherwise specified, binder application rates shall be selected to fill 85% of the theoretical voids of the mat.

Primer-sealing

- BS12 A single coat primer-seal using a suitable cut-back or proprietary binder shall be applied to basecourse material for protection of pavement during construction.

Bitumen Flush Sealing

- BS13 Bitumen flush seals shall be either single or double coat as shown on the drawings, eg 20/10 indicates a double coat flush seal using two applications of bitumen and aggregate, the first aggregate layer being of 20mm nom. size, the second 10mm.

- BS14 Cover aggregate shall be spread immediately after spraying of binder. In no case shall spreading be delayed more than 8 minutes (or so that bitumen has cooled such that adhesion of aggregate is compromised).

- BS15 All spray records, aggregate supply tonnage and receipts shall be retained and passed onto the superintendent as part of the quality assurance procedures.

Flexible Pavement Notes

- FP1 All sub-base and base course materials shall conform with RMS QA Specification 3051 "Unbound and Modified Base and Sub-base Materials for Surface Road Pavements.

- FP2 All sub-base and base course materials shall be compacted to achieve the following compaction standards -

Base course
Minimum 98% MMDD AS1289.5.2.1 - 2003 - Methods of Testing Soils for Engineering Purposes

Sub-base
Minimum 98% MMDD AS1289.5.2.1 - 2003 - Methods of Testing Soils for Engineering Purposes

Concrete Notes

General

- CN1 Use "AS3972 - 2010 - General purpose and blended cements - Type GP" cement (UNO).

- CN2 All concrete shall be subject to project control sample and testing to AS3600 - 2009 - concrete structures.

- CN3 Consolidate all concrete, including footings and slabs on ground with mechanical vibrators.

- CN4 Cure all concrete as follows -
- keep surfaces continuously wet for 3 days, then
- prevent moisture loss for the next 4 days using polythene sheeting or wet hessian protected from wind and traffic, and then allow drying out.
- curing compounds may be used provided that they comply with AS3799 and they do not affect floor finishes.
- PVA-based curing compounds are NOT acceptable.

- CN5 Fix reinforcement as shown on drawings. The type and grade is indicated by a symbol as shown below -

N hot rolled deformed bar, grade 500
R plain round bar, grade 250
SL / RL hard drawn wire fabric square or rectangular

following this symbol a numeral indicates the specified diameter.

- CN6 Provide bar supports or spacers to provide concrete cover as detailed to all reinforcement.

Concrete Pavements

- CN7 Concrete mix parameters -
maximum aggregate size 20mm
flexural strength at 28 days = 3.5 MPa, F'c= 32 MPa, (UNO)
flexural strength at 90 days = 3.85 MPa
max water/cement ratio = 0.55
max shrinkage limit = 650 micron strains (AS1012.13-1992)
min cement content = 300kg/m³
cement to be type "SL" (normal cement) to AS3972-2010
slump = 80mm

- CN8 Early age saw cutting ('softcut') or similar shall be used for initial saw cut. It is to be performed as soon as the concrete has hardened sufficiently, to prevent excessive chipping, spalling, or tearing regardless of time or weather conditions.

- CN9 Joint layout shall be as detailed on the plans.

- CN10 Provide 10mm wide expansion joints between all buildings, other structures and pavements.

- CN11 Bond breaker to be two (2) uniform coats of bitumen emulsion all over the exposed surface and on end.

- CN12 Dowels and tie bars to meet strength requirements of structural grade steel in accordance with AS ISO 1302 - 2005 - geometrical product specifications.
Dowels and tie bars shall be -
straight,
to length specified,
all dowels to be hot dip galvanised,
sawn to length not cropped.

- CN13 Dimensions of sealant reservoir dependant on the sealant type adopted. Superintendent approval to be obtained for sealant and reservoir dimensions and detail proposed by the contractor. Refer to plans for typical arrangement and sealant.

- CN14 Prior to the placement of concrete in the adjacent slab, 'Ableflex' filler shall be adhered to the already cast and cleaned concrete face using an approved waterproof adhesive. Adhesive shall be liberally applied to the full face of the concrete slab to be covered by the filler, and on the full face of the filler to be adhered.

- CN15 The base course shall be kept moist (not wet) by sprinkling with water immediately prior to pouring the concrete.

- CN16 All work to be finished to satisfy its intended use as shown on the plans, and / or in accordance with the specification.

Kerbing Notes

- CN17 All concrete kerbs to have a minimum characteristic compressive strength F'c=25MPa (UNO).

- CN18 All kerbs, dish drains, etc. to be constructed on 75mm minimum base course.(UNO on the Drawings)

- CN19 Kerb expansion joints shall be formed from 10mm 'Ableflex' (or approved equivalent) for the full depth of the section.

- CN20 Expansion joints shall be located at drainage pits, tangent points of curves and elsewhere at 12m maximum spacing (UNO).

- CN21 Tooled joints shall be min 3mm wide and located at maximum 3m spacing.

- CN22 Integral kerb joints shall match the location of the pavement jointing.

Linemarking Notes

- LM1 All linemarking works to be in accordance with either the current Australian standard AS1742.2-2009-Manual Uniform Traffic Control Devices, or as shown on the plans or as directed by the superintendent.

- LM2 The scope of work shall include all pavement markings to roads.

- LM3 The work carried out and testing performed shall comply with the current, relevant Australian standards and RMS standards where necessary.

- LM4 All markings shall be spotted out and verified by the contractors representative prior to application.

- LM5 Paint shall be applied at a wet thickness of between 0.35mm - 0.45mm.

- LM6 Paint shall only be applied to clean and dry surfaces.

- LM7 All longitudinal lines shall be applied by a self-propelled machine.

- LM8 Linemarking removal shall be carried out by grinding or sandblasting. Removal by burning will not be permitted.

- LM9 The extent of linemarking to be eradicated shall be confirmed on site prior to removal. Any markings incorrectly removed shall be reinstated at the contractor's expense.

- LM10 All markings shall be completed in a workmanlike manner and be straight, smooth and with even curves. Any non-conforming work, shall be removed and reinstated at the direction of the superintendent at the contractor's expense.

- LM11 Linemarking on AC pavements to be provided no sooner than 7-10 days once the asphalt has set.

Pavement Legend



Driveway Pavement
Concrete driveway in accordance with Camden Council details.



AC Carpark Pavement
For pavement details refer to drawing MMD-369626-C-DR-CB-DA-0411



Loading Dock Pavement
For pavement details refer to drawing MMD-369626-C-DR-CB-DA-0411



Concrete Carpark Pavement
For pavement details refer to drawing MMD-369626-C-DR-CB-DA-0411



Footpath Pavement (Pavers)
For pavement details refer to drawing MMD-369626-C-DR-CB-DA-0411



Road Pavement (Pavers)
For pavement details refer to drawing MMD-369626-C-DR-CB-DA-0411



Pavement Reinstatement
For pavement details refer to drawing MMD-369626-C-DR-CB-DA-0411



Landscape
Refer to Landscape Architect's specification for details.

Survey Legend

268°02' 198.12 Existing boundary, bearing & distance

P I N E Existing road name

12.56 Existing kerb and spot levels

MESH FENCE Existing fence

+13.26 Existing spot level

12.56 Existing earth batter

0.36 8H 4 Existing tree, level, (trunk diameter, height and spread)

ES Existing sewer

250mm DIA PIPE INV.12.4 Existing stormwater drainage

EW Existing water

EE Existing underground electrical

EG Existing gasmain

EREW Existing recycled water

EL Existing underground telecommunications

Light symbols Existing electricity pit, pole, pole with light and light pole

Gas symbols Existing gas valve

Sewer symbols Existing sewer pit and maintenance hole

Grate symbols Existing stormwater grate, maintenance hole and pit

Hydrant symbols Existing water hydrant, stop valve and valve

Telecom symbols Existing telecommunications pit and pillar

Maintenance hole symbols Existing maintenance hole (unspecified)

Pole symbols Existing pole (unspecified)

Pit symbols Existing pit (unspecified)

Traffic signal symbols Existing traffic signal

Stanchion symbols Existing overhead electrical stanchion

Pavement symbols Existing pavement

95 Major contour

94.8 Minor contour

0 Easement

Retaining wall symbols Existing retaining wall

Bulk Earthworks Legend

B10.00 Construct surface to bulk earthworks level

BE10.00 Construct surface to bulk earthworks platform level

10.00 Construct surface to bulk earthworks contour level

Batter 1 1 Construct batter slope

Civil Works Legend

ROAD No 1 Road name / number

Design control line and chainage

Limit of works

Sawcut existing pavement

KO Construct kerb only

IK Construct integral kerb

FK Construct flush kerb

TE Construct thickened edge

PR Construct kerb pram ramp

VC Construct kerb vehicular crossing to Camden Council requirements

Transition kerb profile over 1.5m

Construct batter

RW Construct retaining wall

Construct Bollard

Civil Grading Legend

P10.00 Construct surface to level..

G10.00 Proposed level

TOK10.00 Grate level

P10.00* Top of kerb level

BUILDING Levels shown thus - P10.00* are to be confirmed on site prior to the commencement of works

F10.00 Finished floor level

F9.50 Major contour

Minor contour

XX % Fall Construct finished surface to grade

Batter 1 1 Construct batter slope

Stormwater Drainage Legend

A1 Stormwater drainage structure / pit number Refer to pit schedule

Surface inlet pit

Junction pit

SW Stormwater drainage line

US120.00 Upstream invert level

Ø300 2' Pipe size / class

1.0 % Grade

10.0m Length

DS110.00 Downstream invert level

Downpipe connection

GD Grated drain

SRM Stormwater rising main

Catch drain

Construct subsoil drainage line

Construct subsoil intermediate riser

Construct subsoil high end riser

Overflow path

Detention Tank

Erosion and Sediment Control Legend

X Construct temporary sediment fence

Construct temporary diversion bank

Install sandbag sediment traps

Install haybale sediment traps

Install temporary geotextile filter fabric drop inlet sediment trap

Construct temporary sediment basin

Install temporary site access

Refer to Camden Council standard drawings SD31 for details.

Flood Extents Legend

100 Year flood extents

PMF flood extents

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P2	16.12.16	MMc	Issued for Development Application	SR	JG
P1	15.12.16	MMc	Issued for Client Review	SR	-



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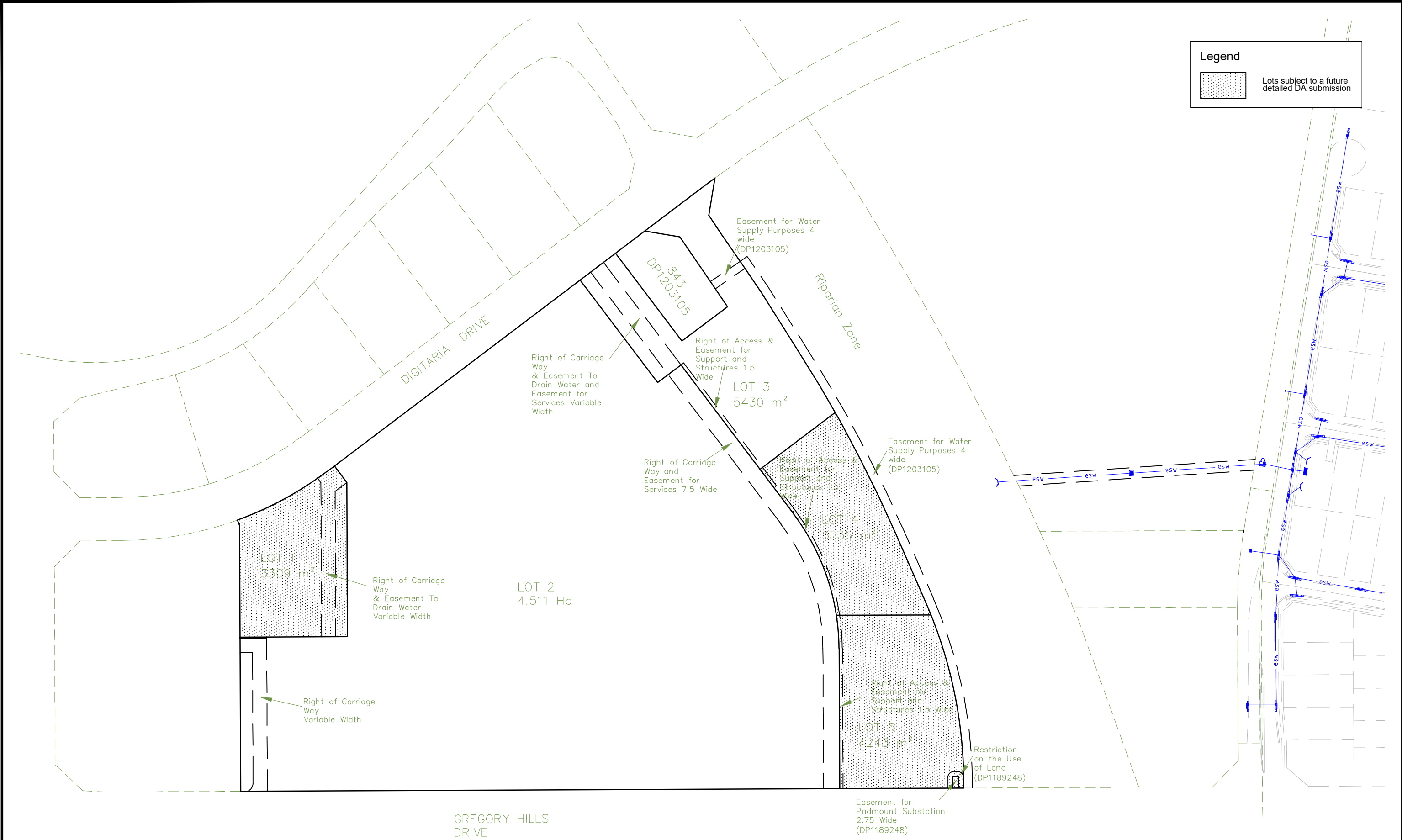
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Corporate Park**

Title
**SOMA Lifestyle
Development Application**

Notes and Legends Sheet

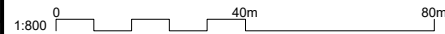
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Drawn	A.Paciben	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	N/A	Status	PRE
Rev	P4	Security	STD
Drawing Number MMD-369626-C-DR-CB-DA-0104			

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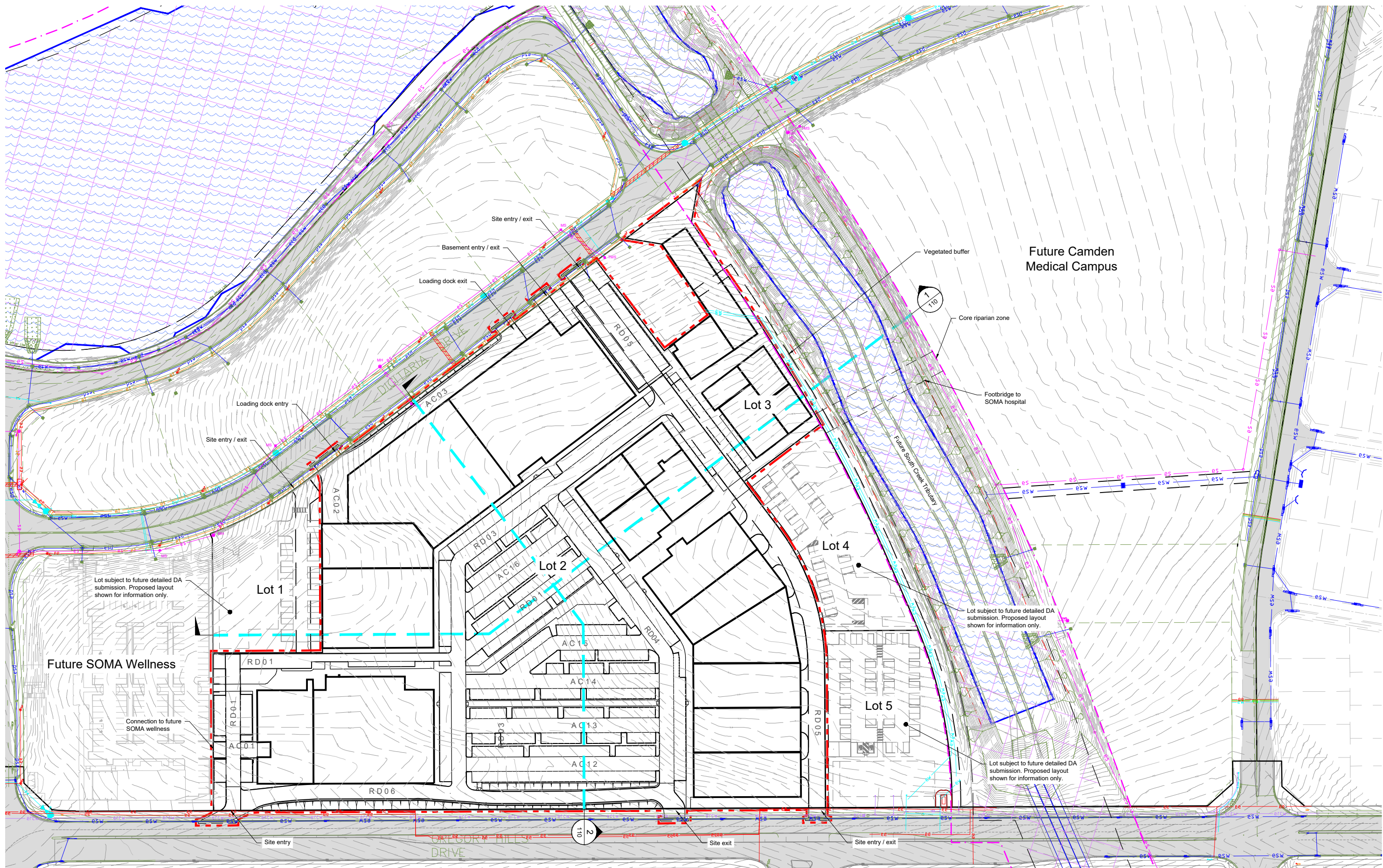
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Boundary Layout Plan

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A. Singh	Approved	J. Gilligan
Scale at A1	1:800	Status	PRE
Rev	P3	Security	STD
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1:800 0 40m 80m



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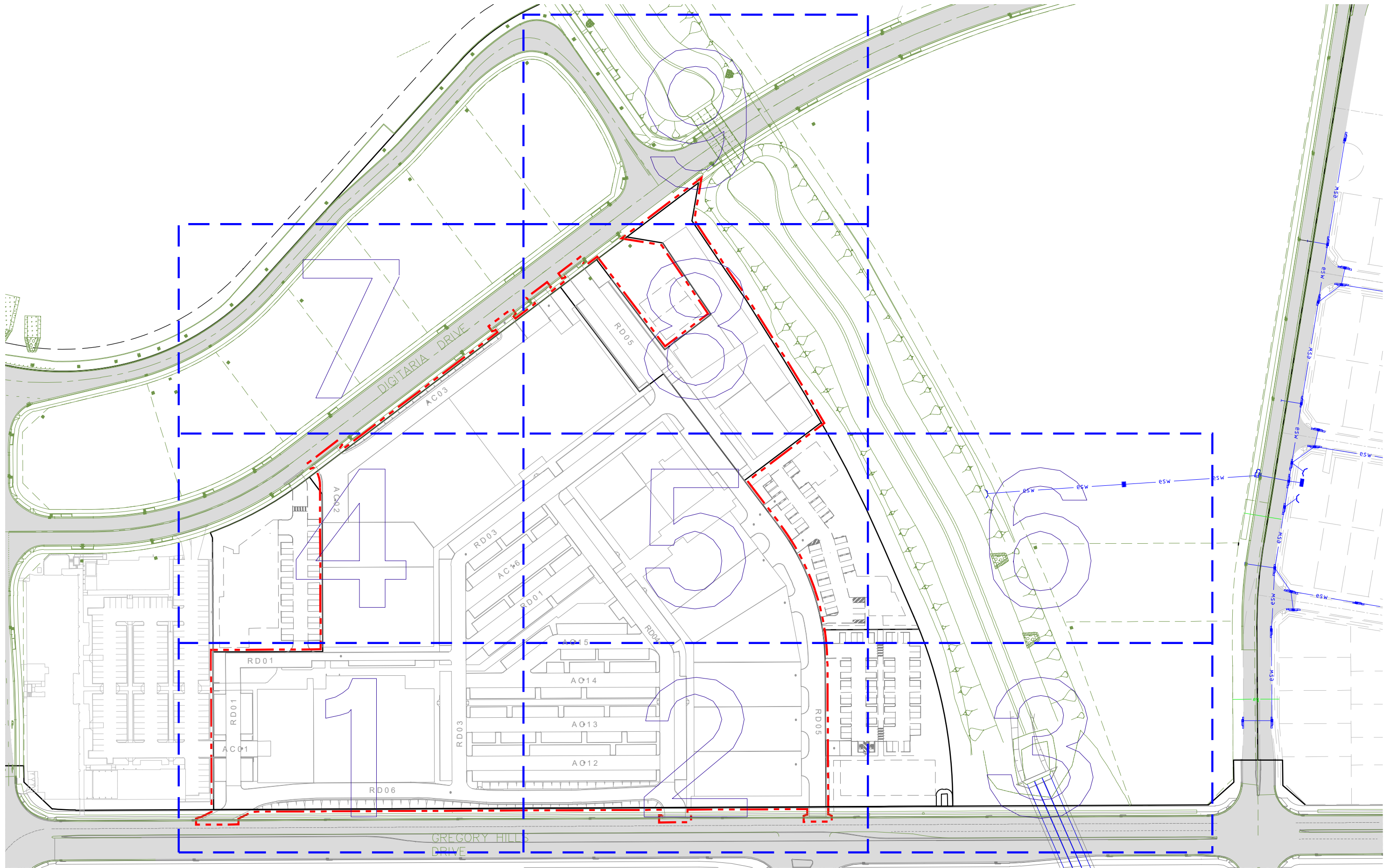
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General Arrangement Plan

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	A.Paciben	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	1:800	Status	PRE
Drawing Number	MMD-369626-C-DR-CB-DA-0106	Rev	P4
		Security	STD

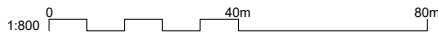
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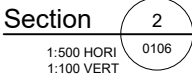
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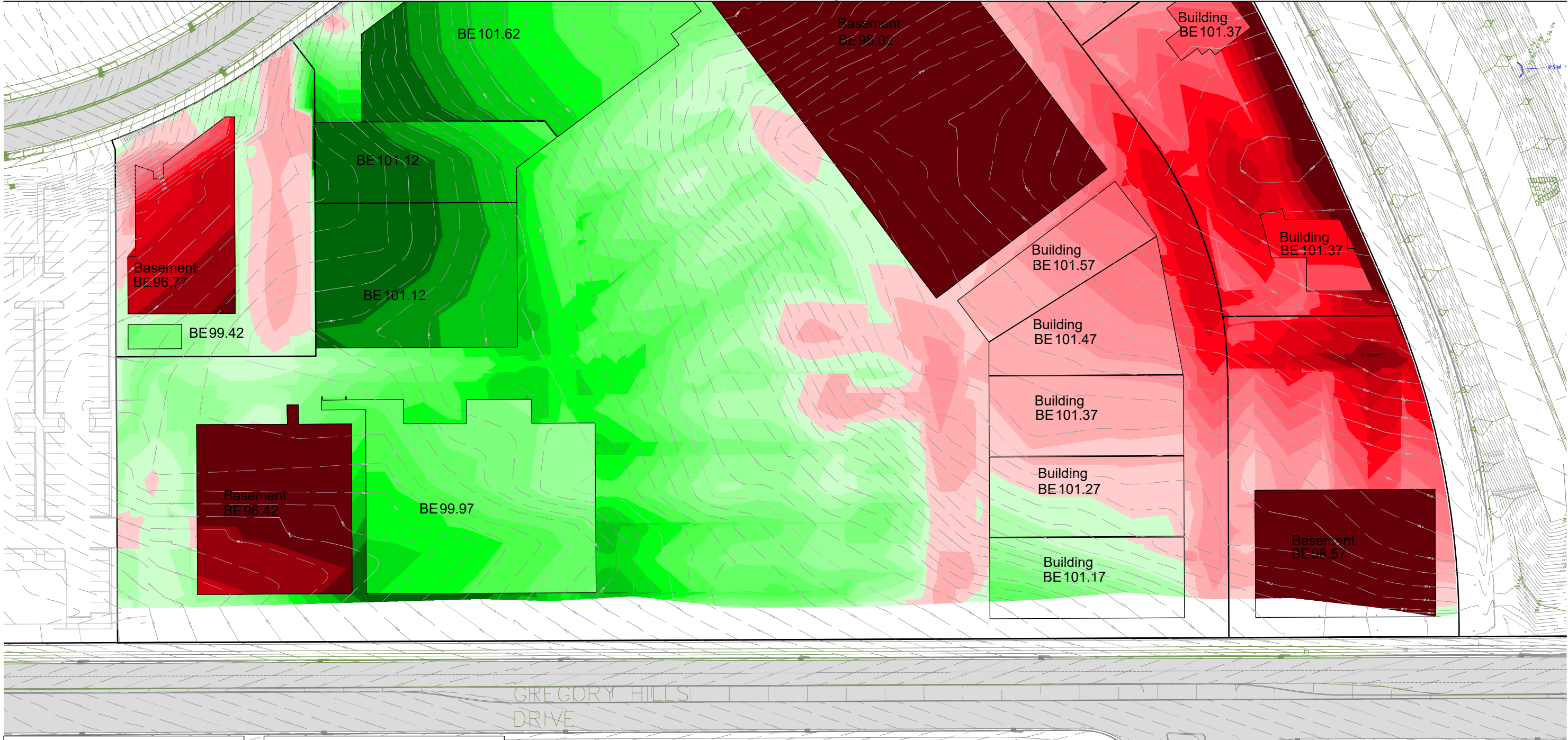
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Drawing Sheet Key Plan

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Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	1:800	Status	PRE
Rev	P4	Security	STD
Drawing Number MMD-369626-C-DR-CB-DA-0107			

[illegible]



Depth Range Legend	
	-9.9m to -2.0m
	-2.0m to -1.8m
	-1.8m to -1.6m
	-1.6m to -1.4m
	-1.4m to -1.2m
	-1.2m to -1.0m
	-1.0m to -0.8m
	-0.8m to -0.6m
	-0.6m to -0.4m
	-0.4m to -0.2m
	-0.2m to 0m
	0m to 0.2m
	0.2m to 0.4m
	0.4m to 0.6m
	0.6m to 0.8m
	0.8m to 1.0m
	1.0m to 1.2m
	1.2m to 1.4m
	1.4m to 1.6m
	1.6m to 1.8m
	1.8m to 2.0m
	2.0m to 9.9m

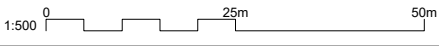
Earthworks Notes
Estimated volumes between existing survey and bulk earthworks levels. It is the contractors responsibility to verify all volumes prior to construction:
• Topsoil stripping has not been included within the volume calculations. • Assumed building slabs 230mm • Assumed carpark pavement 290mm • Assumed footpath pavement 285mm • Assumed road verge & Landscaping 100mm • No allowance has been made for lift shafts. • No allowance has been made for retaining wall footings. • Volumes within stormwater trenches has not been calculated. • No bulking factors have been applied

Note
Earthworks volumes are shown including lots 1, 4 and 5. Volumes within these lots are subject to change pending documentation of the future detailed DA covering these lots.

Earthworks Volumes
Approximate volumes
total cut = -45,384m³
total fill = +24,860m³
balance = -20,524m³

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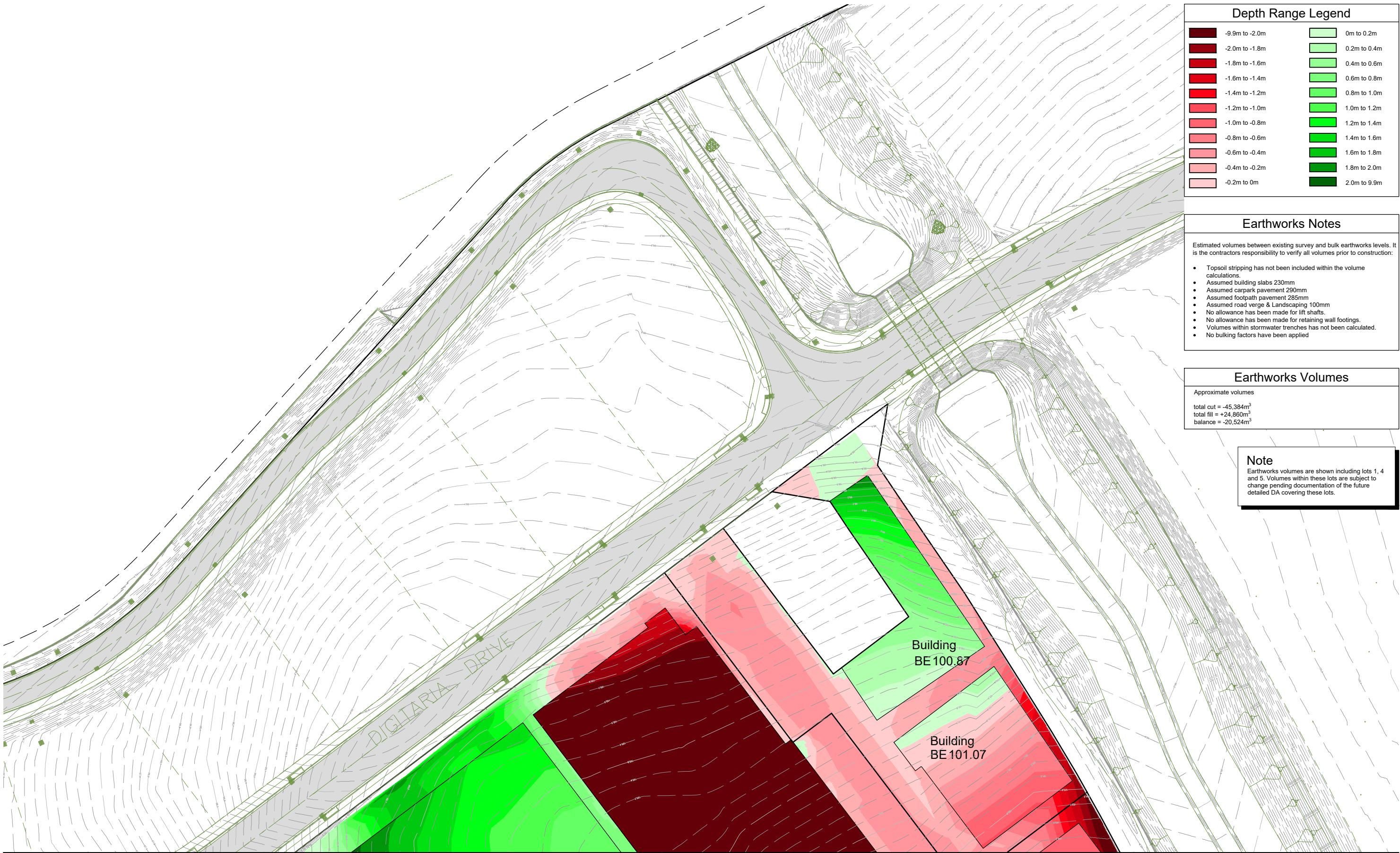
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**Bulk Earthworks Plan
Sheet 1**

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A. Singh	Approved	J. Gilligan
Scale at A1	1:500	Status	PRE
Rev	P3	Security	STD
Drawing Number MMD-369626-C-DR-CB-DA-0201			



Depth Range Legend			
	-9.9m to -2.0m		0m to 0.2m
	-2.0m to -1.8m		0.2m to 0.4m
	-1.8m to -1.6m		0.4m to 0.6m
	-1.6m to -1.4m		0.6m to 0.8m
	-1.4m to -1.2m		0.8m to 1.0m
	-1.2m to -1.0m		1.0m to 1.2m
	-1.0m to -0.8m		1.2m to 1.4m
	-0.8m to -0.6m		1.4m to 1.6m
	-0.6m to -0.4m		1.6m to 1.8m
	-0.4m to -0.2m		1.8m to 2.0m
	-0.2m to 0m		2.0m to 9.9m

Earthworks Notes	
Estimated volumes between existing survey and bulk earthworks levels. It is the contractors responsibility to verify all volumes prior to construction:	
• Topsoil stripping has not been included within the volume calculations. • Assumed building slabs 230mm • Assumed carpark pavement 290mm • Assumed footpath pavement 285mm • Assumed road verge & Landscaping 100mm • No allowance has been made for lift shafts. • No allowance has been made for retaining wall footings. • Volumes within stormwater trenches has not been calculated. • No bulking factors have been applied	

Earthworks Volumes	
Approximate volumes	
total cut = -45,384m ³	
total fill = +24,860m ³	
balance = -20,524m ³	

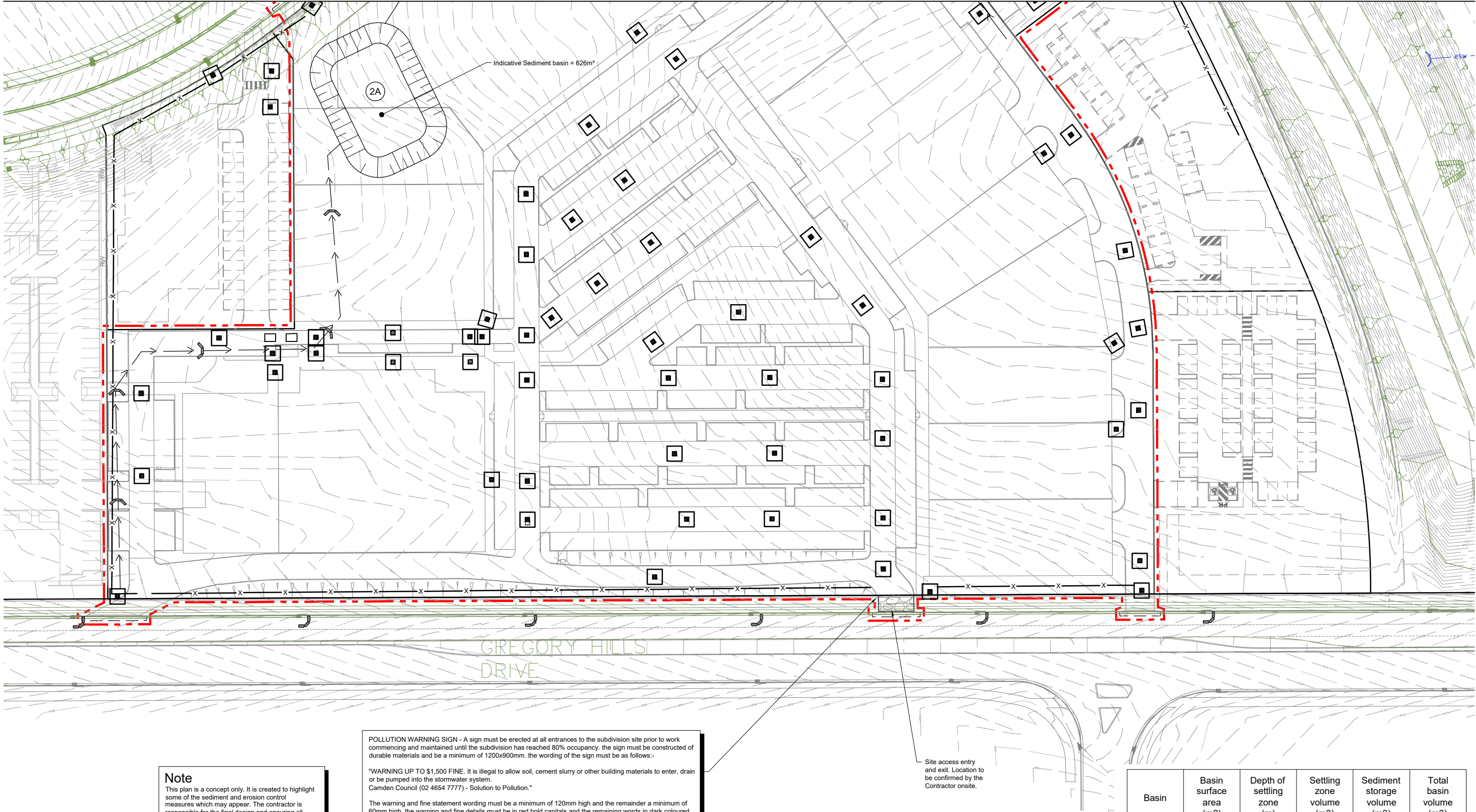
Note	
Earthworks volumes are shown including lots 1, 4 and 5. Volumes within these lots are subject to change pending documentation of the future detailed DA covering these lots.	

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											Drawn	M. Mcrae		Coordination	S. Reilly			
											Dwg check	A.Singh		Approved	J.Gilligan			
P3	25.10.17	GAP	Re-Issued for DA - Revised Layout	SR	JG						Scale at A1	1:500	Status	PRE	Rev	P3	Security	STD
P2	16.12.16	MMc	Issued for Development Application	SR	JG						Drawing Number MMD-369626-C-DR-CB-DA-0202							
P1	15.12.16	MMc	Issued for Client Review	SR	-													
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Basin	Basin surface area (m2)	Depth of settling zone (m)	Settling zone volume (m3)	Sediment storage volume (m3)	Total basin volume (m3)
2A	522	0.6	417	209	626
2B	333	0.6	266	133	399
3	100	0.6	80	40	120

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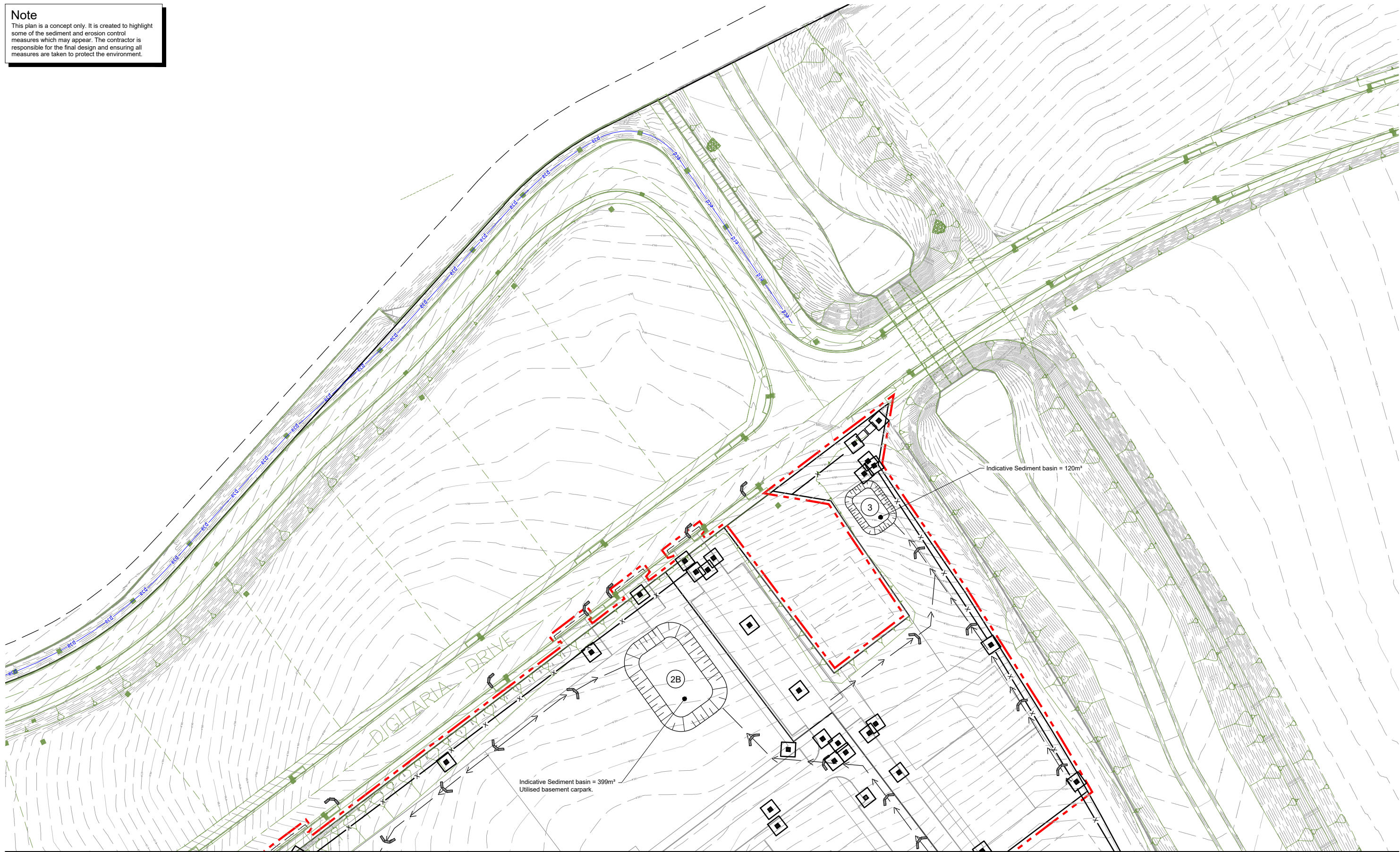
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**Concept Soil and Water
Management Plan Sheet 1**

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Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	1:500	Status	PRE
Rev	P3	Security	STD
Drawing Number MMD-369626-C-DR-CB-DA-0301			

Note
This plan is a concept only. It is created to highlight some of the sediment and erosion control measures which may appear. The contractor is responsible for the final design and ensuring all measures are taken to protect the environment.

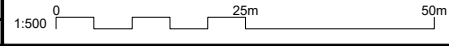


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Title
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**Concept Soil and Water
Management Plan Sheet 2**

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Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
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		Rev	P3
		Security	STD
Drawing Number MMD-369626-C-DR-CB-DA-0302			

Soil and Water Management Notes

General Instructions

SWM01 These plans present a conceptual soil and water management plan (SWMP) only and shows a possible way of managing soil and erosion. The contractor shall be responsible for the establishment and management of the site and preparing a detailed plan and obtaining approval from the relevant authority prior to the commencement of any works.

SWM02 This plan is to be read in conjunction with the engineering plans and any other plans, written instructions, specification or documentation that may be issued and relating to development of the subject site.

SWM03 The contractor will ensure that all soil and water management works are consistent with 'Managing Urban Stormwater - Soils and Construction' - also known as 'The Blue Book'.

SWM04 All builders and sub-contractors shall be informed of their responsibilities in minimising the potential for soil erosion and pollution to downslope lands and waterways.

Erosion Control

SWM05 Water shall be prevented from entering the permanent drainage system until sediment concentration is less than or equal to 50mg/L, ie the catchment area has been permanently landscaped and / or any likely sediment has been filtered through an approved structure.

SWM06 Any sand used in the concrete curing process (spread over the surface) will be removed as soon as possible and within 10 working days from placement.

SWM07 Acceptable receptors will be constructed for concrete and mortar slurries, paints, acid washings, light-weight waste materials and litter.

SWM08 'Sediment' fencing will be installed as indicated on the plans and at the direction of site superintendent to ensure containment of sediment. The sediment fencing will outlet or overflow under stabilised conditions into the sediment basin, to safely convey water into a suitable filtering system should the pores in the fabric block.

SWM10 Stockpiles should not be located within 5m of trees and hazard areas, including likely areas of concentrated or high velocity flows such as waterways, drainage lines, paved areas and driveways. Where they are within 5m from such areas, special sediment control measures should be taken to minimise possible pollution to downstream waters. Measures should also be applied to prevent the erosion of the stockpile.

SWM11 All cut and fill batters are to be seeded and mulched within 14 days of completion of formation.

SWM12 Any existing trees which form part of the final landscaping plan will be protected from construction activities by-

- Protecting them with barrier fencing or similar materials installed outside the drip line,
- Ensuring that nothing is nailed to them,
- Prohibiting paving, grading, sediment wash or placing of stockpiles within the drip line except under the following conditions,

(i) Encroachment only occurs on one side and no closer to the trunk than either 1.5 metres or half the distance between the outer edge of the drip line and the trunk, whichever is the greater,

(ii) A drainage system that allows air and water to circulate through the root zone (e.g. a gravel bed) is placed under all fill layers of more than 300 millimetres depth

(iii) Care is taken.

SWM13 During windy weather, large disturbed unprotected areas should be kept moist (not wet) by sprinkling with water to keep dust under control.

SWM14 Temporary protection from erosive forces will be undertaken on lands where final shaping has not been completed but works are unlikely to proceed for periods of two months or more (eg. on topsoil stockpiles). This may be achieved with a vegetative cover. A recommended listing of plant species for

temporary cover is -

- autumn/winter sowing
 - oats/ryecorn at 20 kg/ha
 - japanese millet at 10 kg/ha
- spring/summer sowing
 - japanese millet at 20 kg/ha
 - oats/ryecorn at 10 kg/ha

SWM15 Diversion banks / channels will be rehabilitated as soon as possible and within 5 working days from their final shaping. Other than in the winter months, suitable materials include turf grasses such as Couch or Kikuyu. During winter, or at other times when temporary rehabilitation (more than 3 months) is required, it is suggested that hessian cloth is used but only if tacked with appropriate pegs and an anionic bitumen emulsion. Foot and vehicular traffic should be kept away from these areas.

SWM16 Undertake site development works in accordance with the engineering plans. Where possible, phase development so that land disturbance is confined to areas of workable size.

Construction Sequence

SWM17 Where practical, the soil erosion hazard on the site should be kept as low as possible. To this end, works should be undertaken in the FOLLOWING SEQUENCE -

- Install inlet sediment traps to all gully pits fronting the site,
- Install a 1.8m chain wire fence around the boundaries and attach hessian cloth or similar to it on the windward side (ties at the top, centre and bottom and at 1m intervals or as instructed by the superintendent),
- Install geofabric sediment fence and sediment traps around all permanent stormwater reticulation structures as shown on the plan,
- Construct stabilised construction entrance as shown on the plan or to location as determined by superintendent,
- Install diversion banks along the boundary where required, rehabilitate disturbed lands downslope from the basins within 20 working days,
- Ensure that the sediment basin is directed onto a turfed area and drains to a suitable location. A temporary stormwater line may be necessary to convey the flows to this location. Construct diversion channels at the boundary to drain into the sediment basin as shown on plans,
- At completion stabilise site and decommission sediment basin and all erosion control devices.

SWM18 Temporary soil and water management structures will be removed only after the lands they are protecting are rehabilitated.

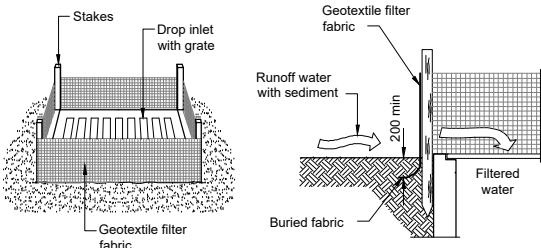
SWM19 Final site landscaping will be undertaken as soon as possible and within 20 working days from completion of construction activities.

Site Inspection and Maintenance

SWM20 At least weekly and after every rain fall event, the contractor will inspect the site and ensure that -

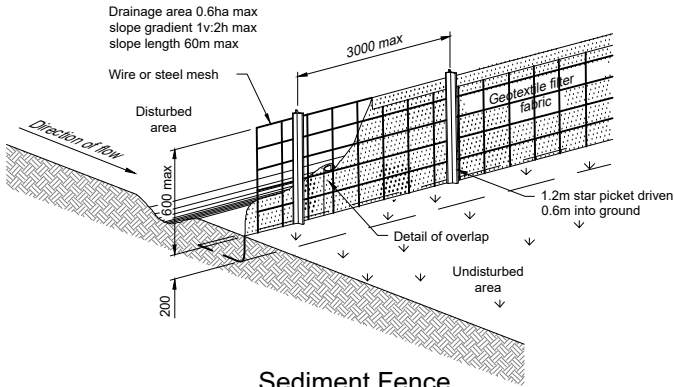
- Drains and all sediment control devices operate effectively and initiate repair or maintenance as required,
- Receptors for concrete and mortar slurries, paints, acid washings, light-weight waste materials and litter are to be emptied as necessary. Disposal of waste shall be in a manner approved by the superintendent,
- Spilled sand (or other materials) is removed from hazard areas, including likely areas of concentrated or high velocity flows such as waterways, gutters, paved areas and driveways,
- Sediment is removed from basins and / or traps when less than 20m³ of trapping capacity remain per 1000m² of disturbed lands, and / or less than 500mm depth remains in the settling zone. Any collected sediment will be disposed in areas where further pollution to down slope lands and waterways is unlikely,
- Rehabilitated lands have effectively reduced the erosion hazard and initiate upgrading or repair as appropriate.

SWM21 The contractor shall provide all monitoring control and testing.



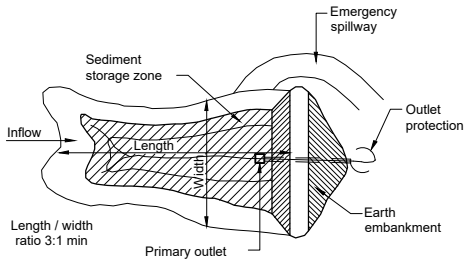
Sediment Trap for Drop Inlet (Geotextile Filter Fabric)

NTS



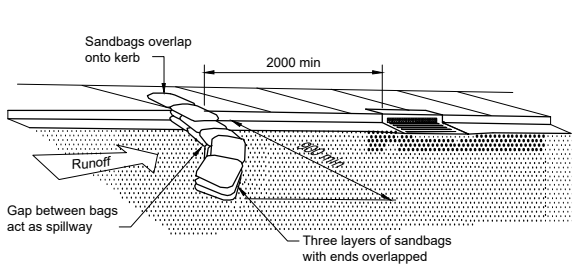
Sediment Fence (Geotextile Filter Fabric)

NTS



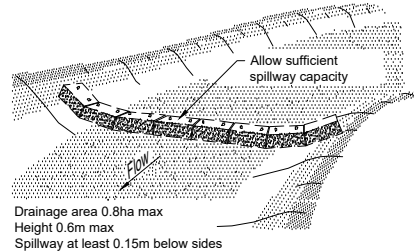
Sediment Basin (Typical) Plan - Type C Soils

NTS



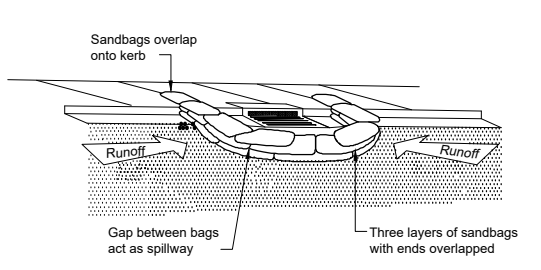
Sediment Trap for Kerb Inlet (On Grade - Sandbag)

NTS



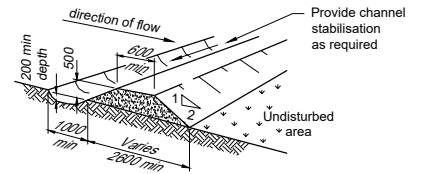
Check Dam - Straw Bale

NTS



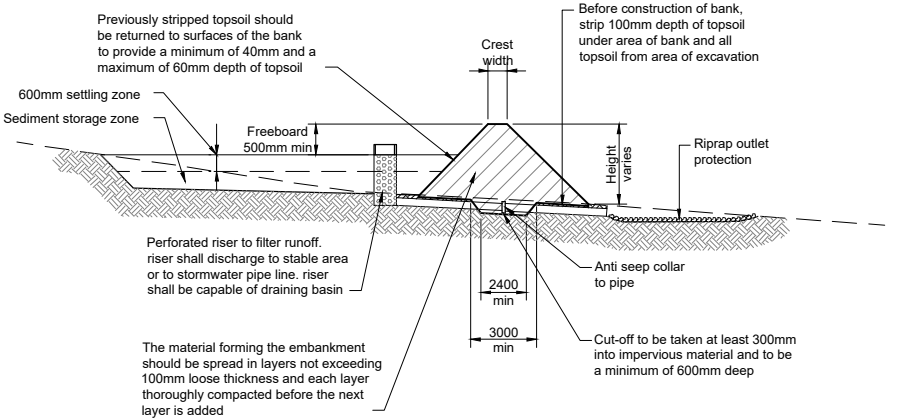
Sediment Trap for Kerb Inlet (at Low Point - Sandbag)

NTS



Diversion Bank (with channel)

NTS



Sediment Basin (Typical) Cross Section - Type C Soils

NTS

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P2	16.12.16	MMc	Issued for Development Application	SR	JG
P1	15.12.16	MMc	Issued for Client Review	SR	-



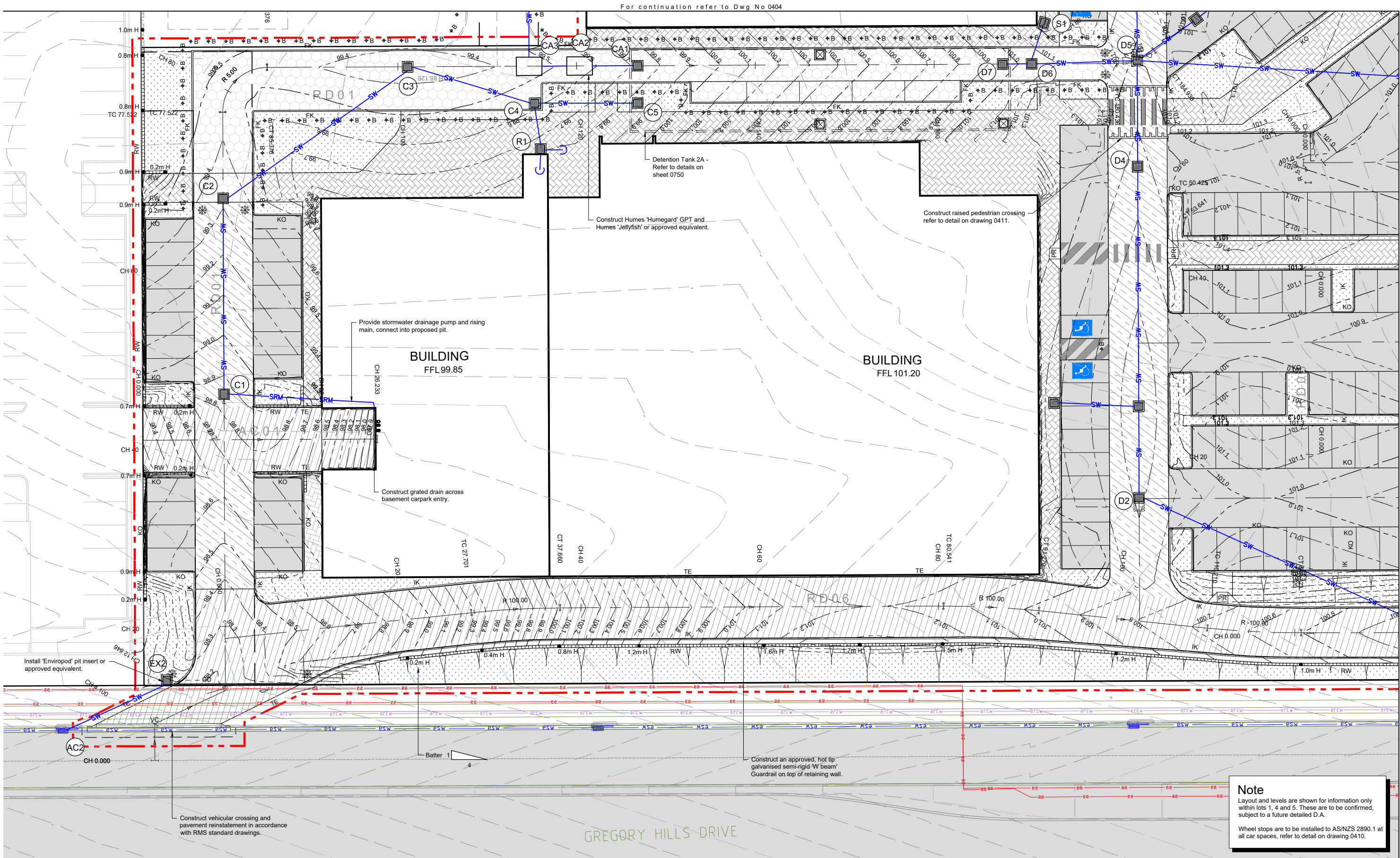
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Client
Gregory Hills
Corporate Park

Title
SOMA Lifestyle
Development Application

Soil and Water Management
Details Sheet

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	N/A	Status	PRE
Rev	P3	Security	STD
Drawing Number MMD-369626-C-DR-CB-DA-0310			



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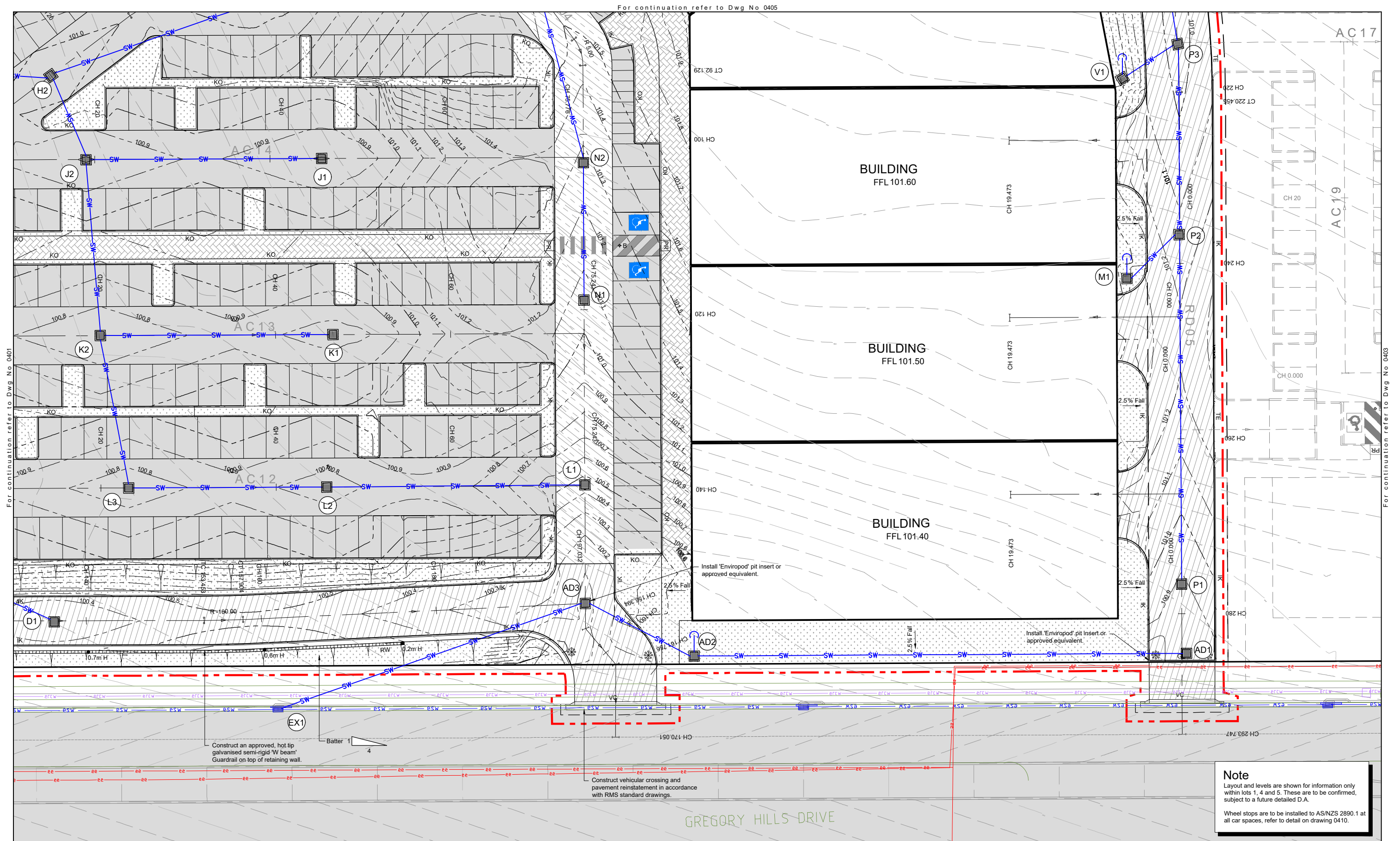
Client
Gregory Hills
Corporate Park

Title
SOMA Lifestyle
Development Application

Siteworks Plan
Sheet 1

Preliminary - Not For Construction

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	A.Paciben	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	Status	Rev	Security
1:200	PRE	P4	STD
Drawing Number MMD-369626-C-DR-CB-DA-0401			



Note

Layout and levels are shown for information only within lots 1, 4 and 5. These are to be confirmed, subject to a future detailed D.A.

Wheel stops are to be installed to AS/NZS 2890.1 at all car spaces, refer to detail on drawing 0410.

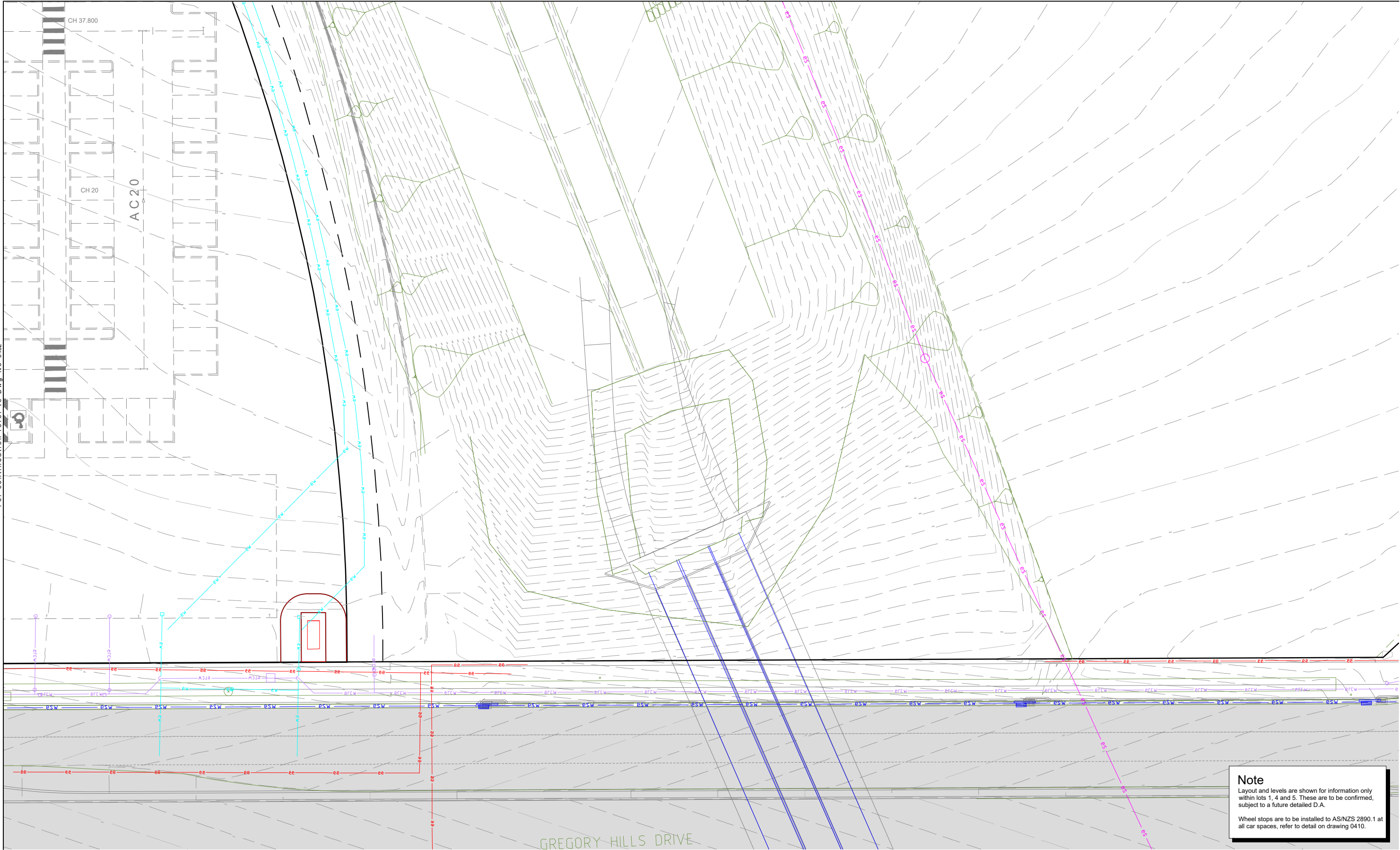
Preliminary - Not For Construction

[illegible]

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For continuation refer to Dwg No 0406

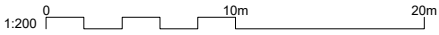
For continuation refer to Dwg No 0402



Note
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P3	25.10.17	GAP	Re-Issued for DA - Revised Layout	SR	JG
P2	16.12.16	MMc	Issued for Development Application	SR	JG
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Client
**Gregory Hills
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Title
**SOMA Lifestyle
Development Application**

**Siteworks Plan
Sheet 3**

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	1:200	Status	PRE
Rev	P3	Security	STD
Drawing Number MMD-369626-C-DR-CB-DA-0403			

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1:200 0 10m 20m



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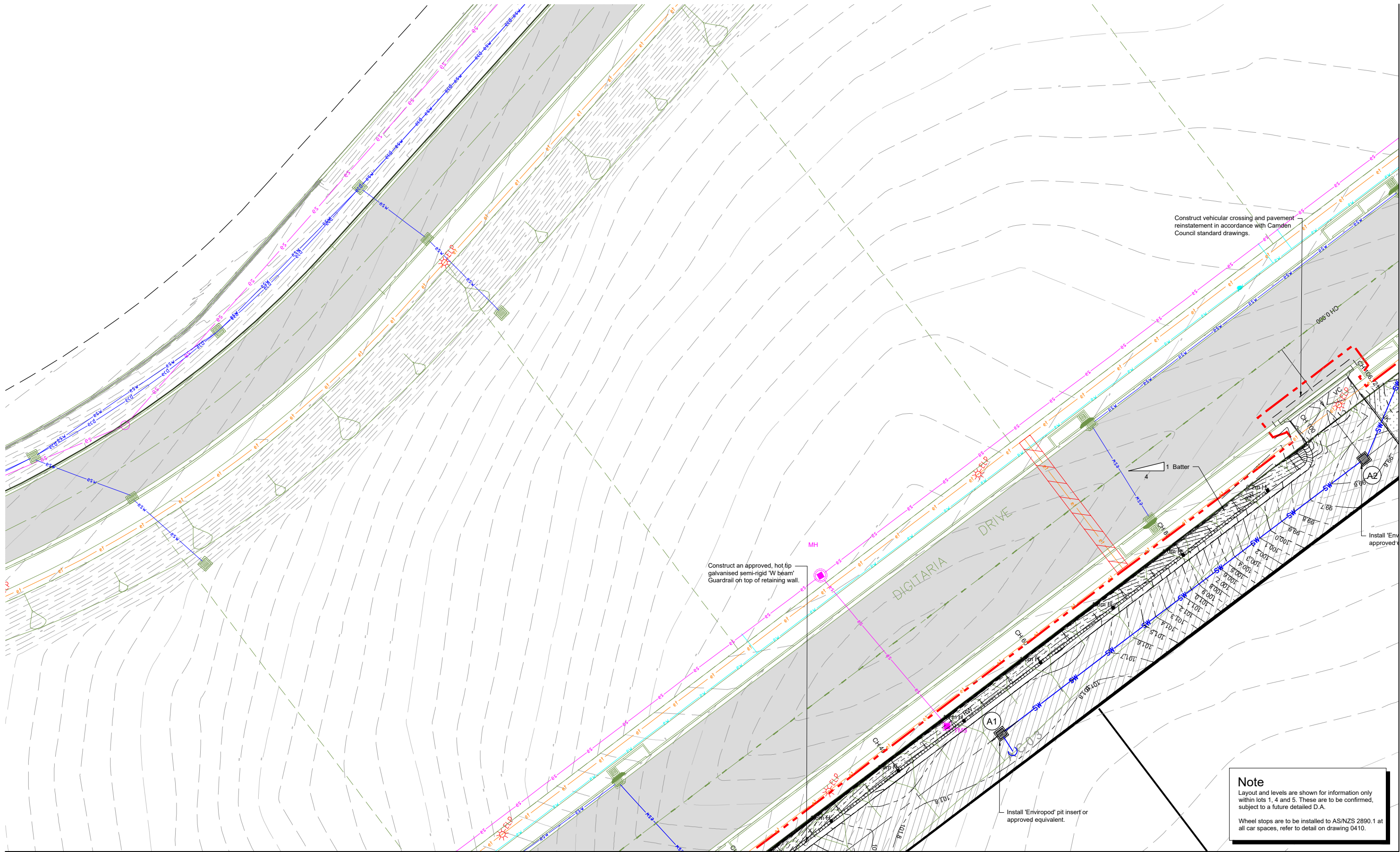
Client
**Gregory Hills
Corporate Park**

Title
**SOMA Lifestyle
Development Application**

**Siteworks Plan
Sheet 5**

Preliminary - Not For Construction

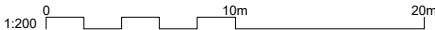
Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	Status	Rev	Security
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Drawing Number MMD-369626-C-DR-CB-DA-0405			



Note
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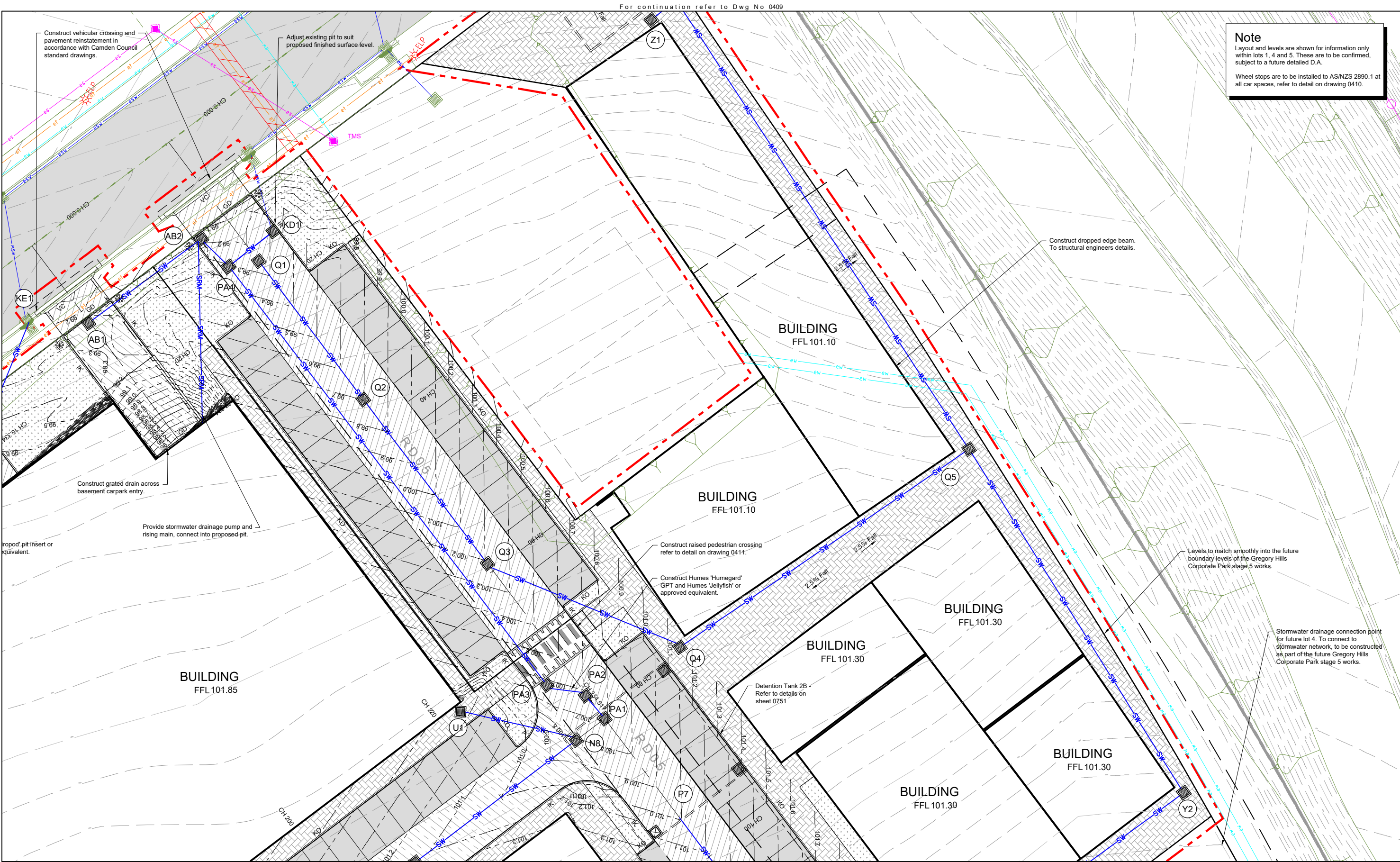
Client
**Gregory Hills
Corporate Park**

Title
**SOMA Lifestyle
Development Application**

**Siteworks Plan
Sheet 7**

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A. Singh	Approved	J. Gilligan
Scale at A1	1:200	Status	PRE
		Rev	P3
		Security	STD
Drawing Number MMD-369626-C-DR-CB-DA-0407			

Preliminary - Not For Construction

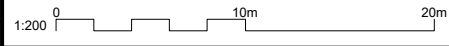


Note
Layout and levels are shown for information only within lots 1, 4 and 5. These are to be confirmed, subject to a future detailed D.A.
Wheel stops are to be installed to AS/NZS 2890.1 at all car spaces, refer to detail on drawing 0410.

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P1	15.12.16	MMc	Issued for Client Review	SR	-



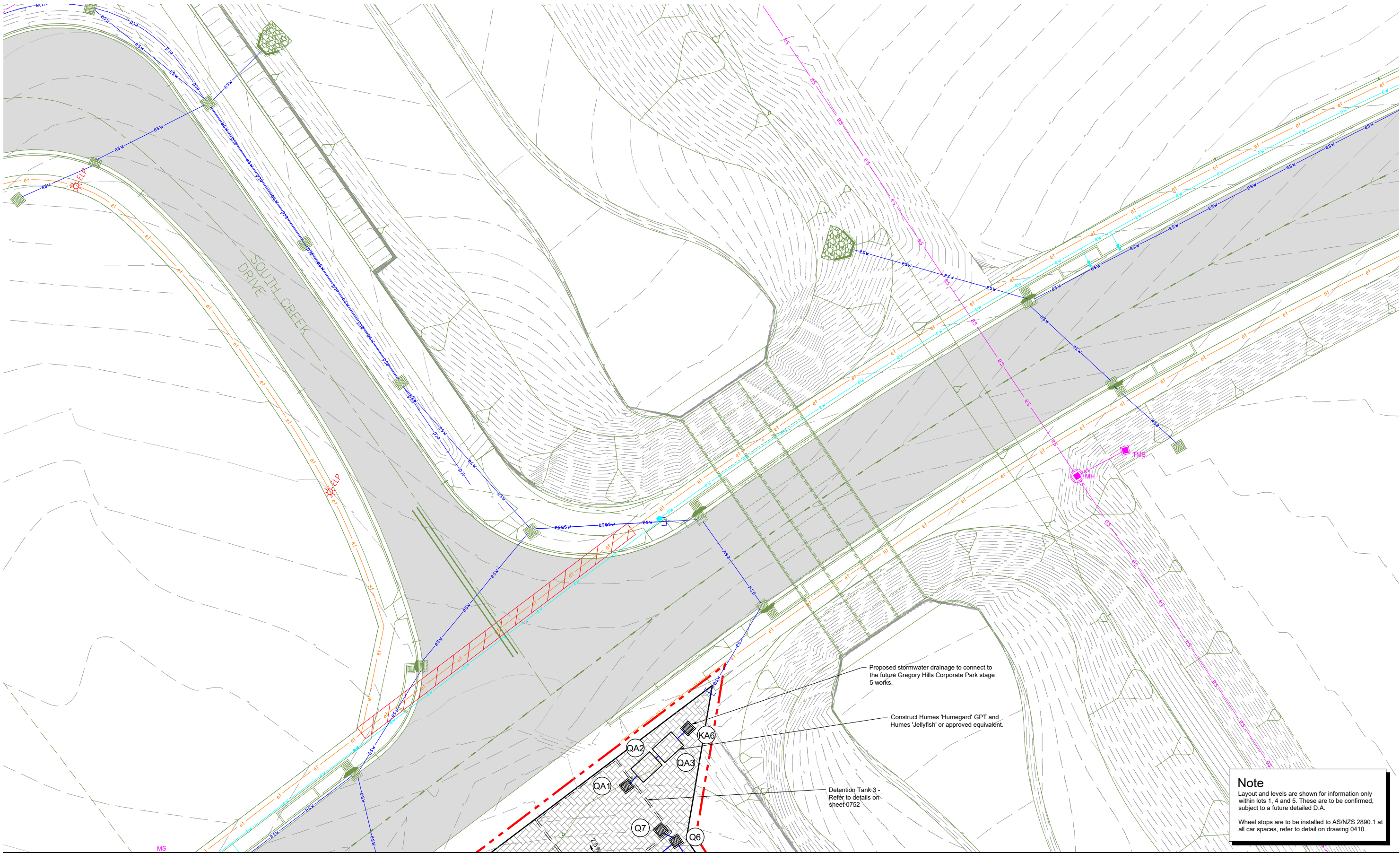
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Title
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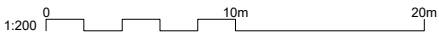
**Siteworks Plan
Sheet 8**

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	A.Paciben	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	1:200	Status	PRE
Drawing Number	MMD-369626-C-DR-CB-DA-0408	Rev	P4
		Security	STD



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P2	16.12.16	MMc	Issued for Development Application	SR	JG
P1	15.12.16	MMc	Issued for Client Review	SR	-
Rev	Date	Drawn	Description	Ch'k'd	App'd



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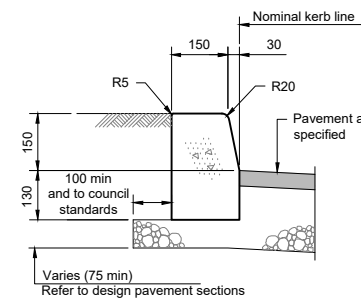
Client
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Title
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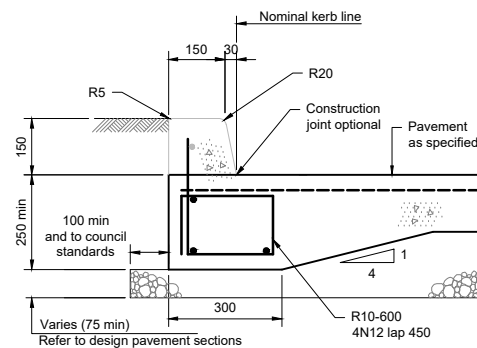
**Siteworks Plan
Sheet 9**

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	A.Paciben	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	1:200	Status	PRE
		Rev	P4
		Security	STD
Drawing Number MMD-369626-C-DR-CB-DA-0409			

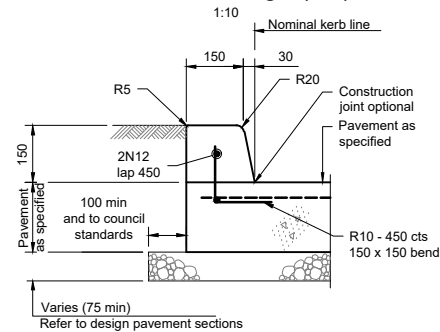
1. Pavement construction is to follow the general approach and specifications as outlined in the Geotechnical report.
2. All pavement design is subject to geotechnical / structural testing, investigation and design. The pavements listed on this drawing are provisional only.
3. Design subgrade CBR to be confirmed by geotechnical engineer during construction and select fill depth to be varied accordingly subject to test results.



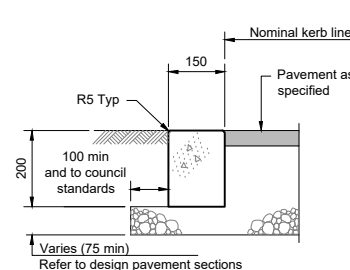
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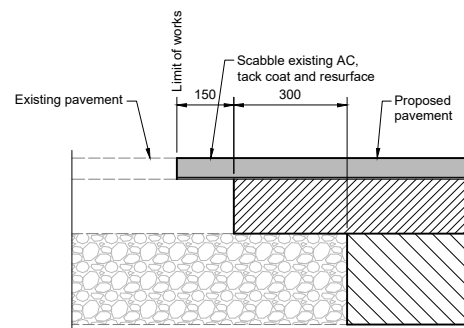
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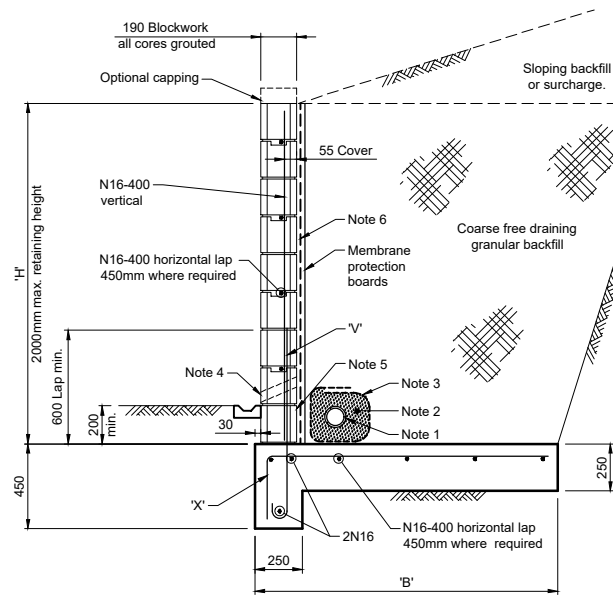
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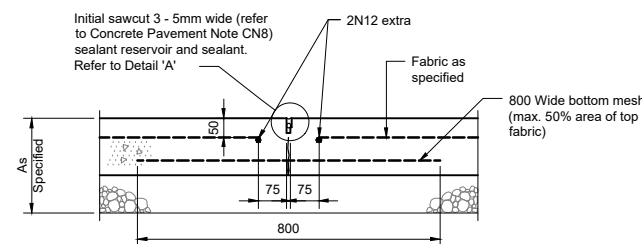


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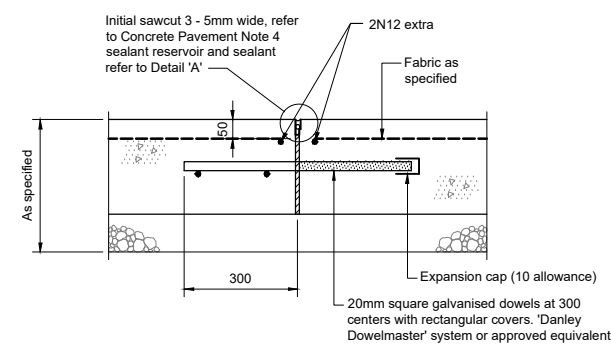


Retaining Wall Schedule		
Wall Height 'H'	Base Width 'B'	Bar Type 'X' & 'V'
800	800	N16-400
These dimesions are provided based on a 5kPa surcharge		

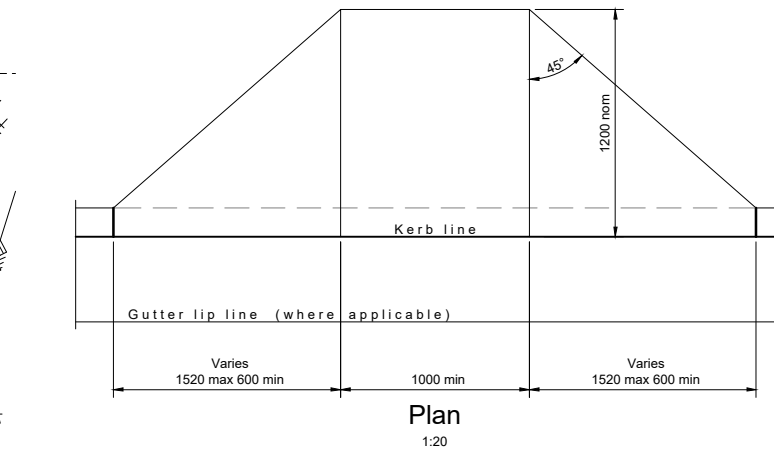
1. Ø100mm rigid slotted uPVC sub-soil pipe with filter sock (on min. 0.5% fall) to nearest available stormwater grate.
2. 150mm surround of 20mm blue metal or gravel.
3. Geofabric surround to be 'Bidum' A24 filter fabric or approved equal.
4. Provide Ø50 weep holes located above concrete dish drain at 1600 maximum centers.
5. Provide 'E' shaped clean-out block at base of retaining wall. omit horizontal bar from top of this block.
6. If tanking membrane is required the design and certification is to be provided by waterproofing specialist.



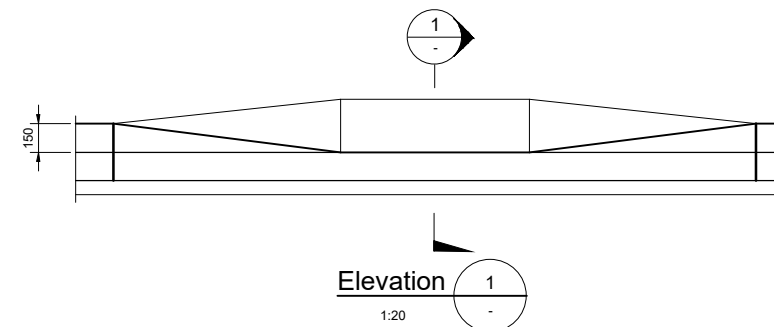
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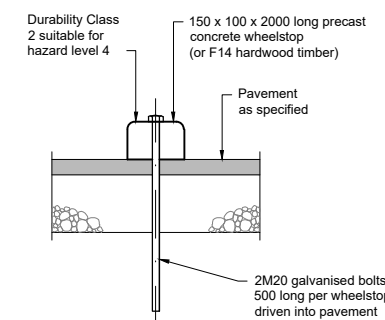
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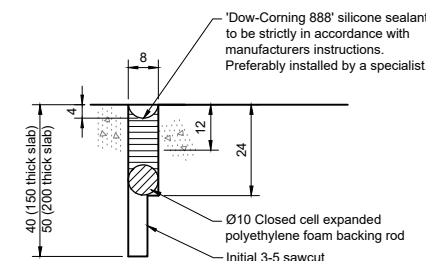
Plan

Elevation

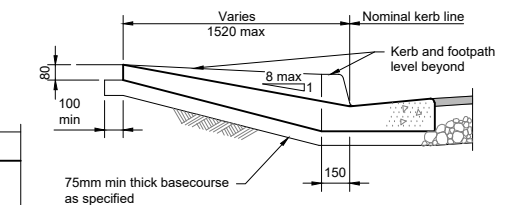
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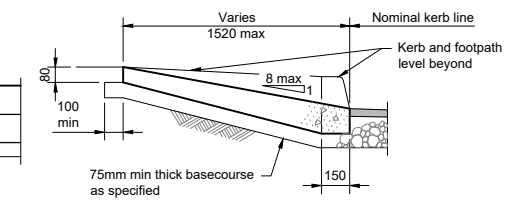
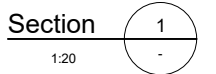
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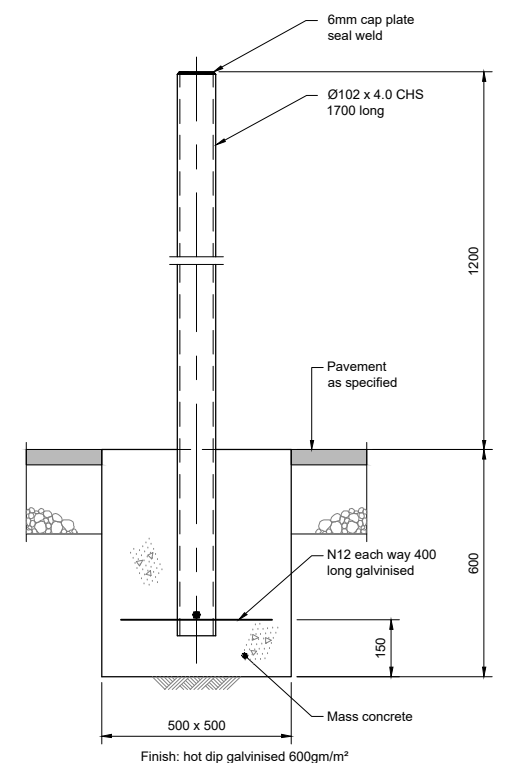
NT



(For kerb and gutter)

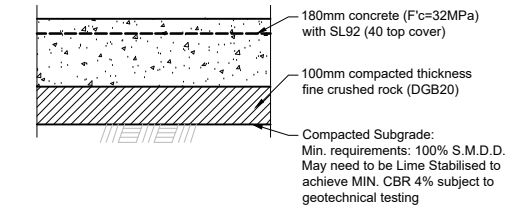


Section 1

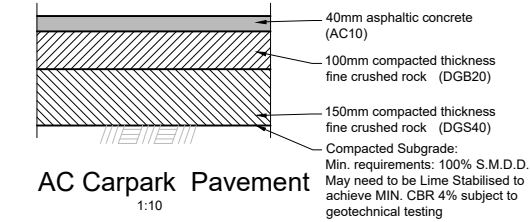
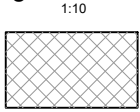


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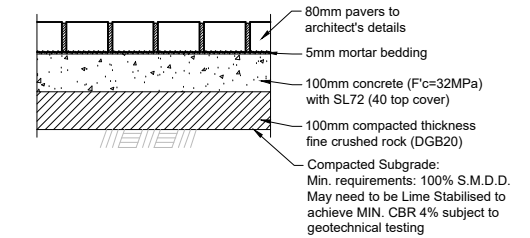
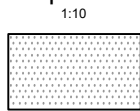
	Designed	P.Cavanagh		Eng check	S. Reilly	
	Drawn	M. Mcrae		Coordination	S. Reilly	
	Dwg check	A.Singh		Approved	J.Gilligan	
	Scale at A1	Status		Rev	Security	
	As Shown	PRE		P3	STD	
Drawing Number						
MMD-369626-C-DR-CB-DA-0410						



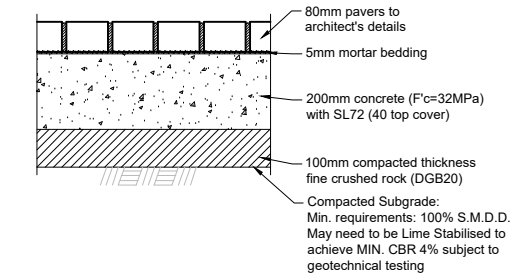
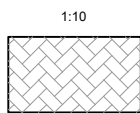
Loading Dock Pavement



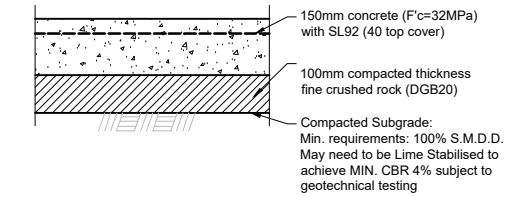
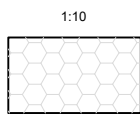
AC Carpark Pavement



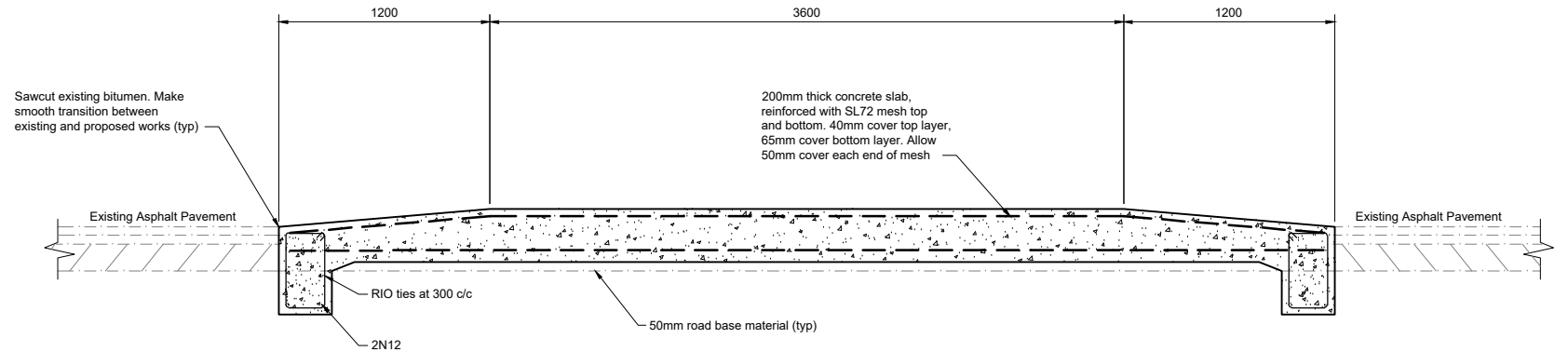
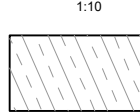
Footpath Pavement (Pavers)



Road Pavement (Pavers)



Concrete Carpark Pavement



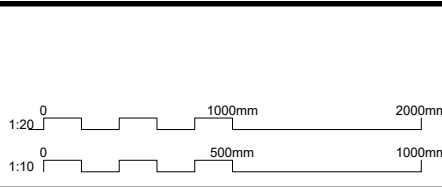
Typical Wombat Crossing Detail

1:20

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P3	25.10.17	GAP	Re-Issued for DA - Revised Layout	SR	JG
P2	16.12.16	MMc	Issued for Development Application	SR	JG
P1	15.12.16	MMc	Issued for Client Review	SR	-



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Client

Gregory Hills
Corporate Park

Title

SOMA Lifestyle
Development Application

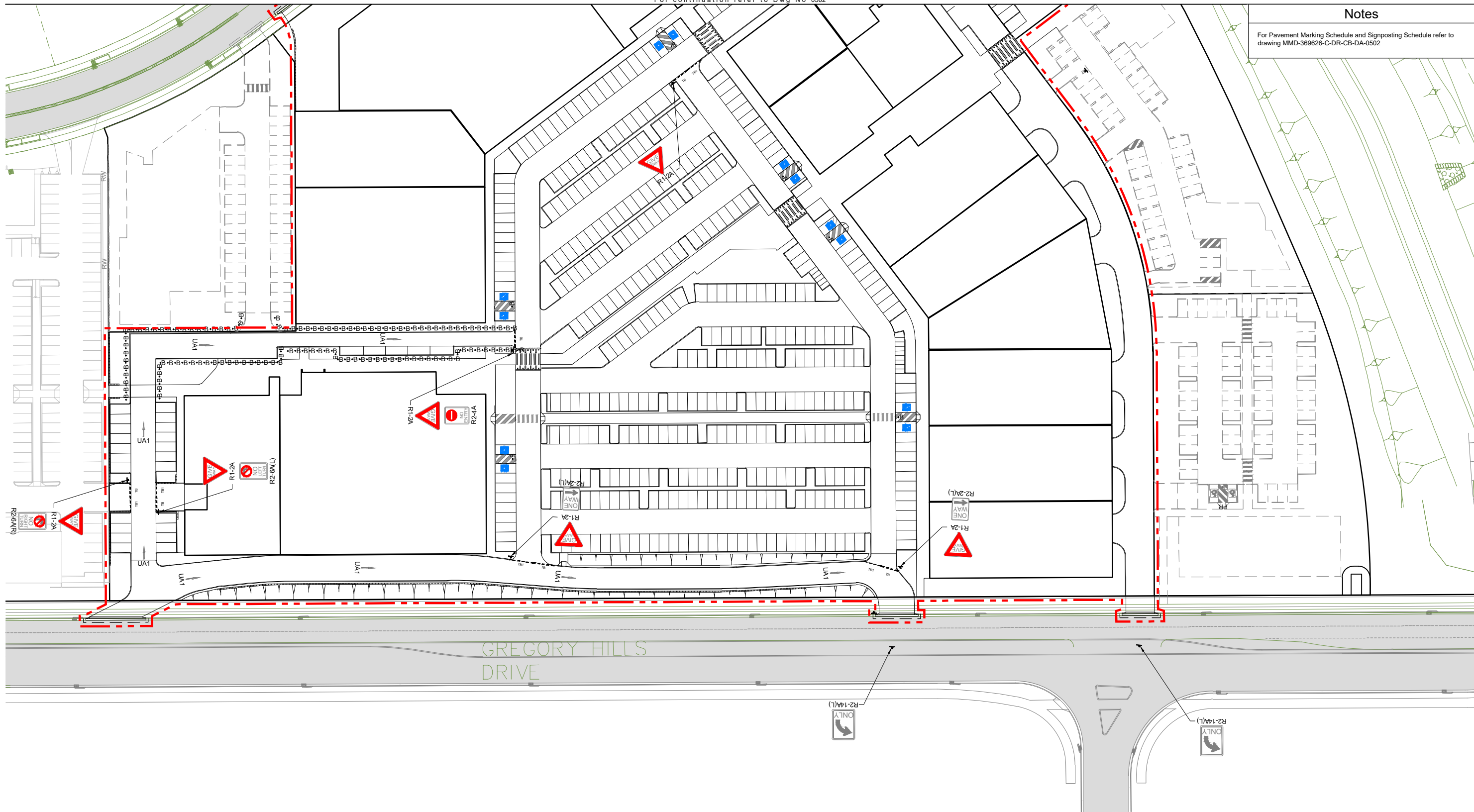
Siteworks Details Sheet
Sheet 2

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	Status	Rev	Security
As Shown	PRE	P3	STD
Drawing Number MMD-369626-C-DR-CB-DA-0411			

For continuation refer to Dwg No 0502

Notes

For Pavement Marking Schedule and Signposting Schedule refer to drawing MMD-369626-C-DR-CB-DA-0502



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P2	16.12.16	MMc	Issued for Development Application	SR	JG
P1	15.12.16	MMc	Issued for Client Review	SR	-

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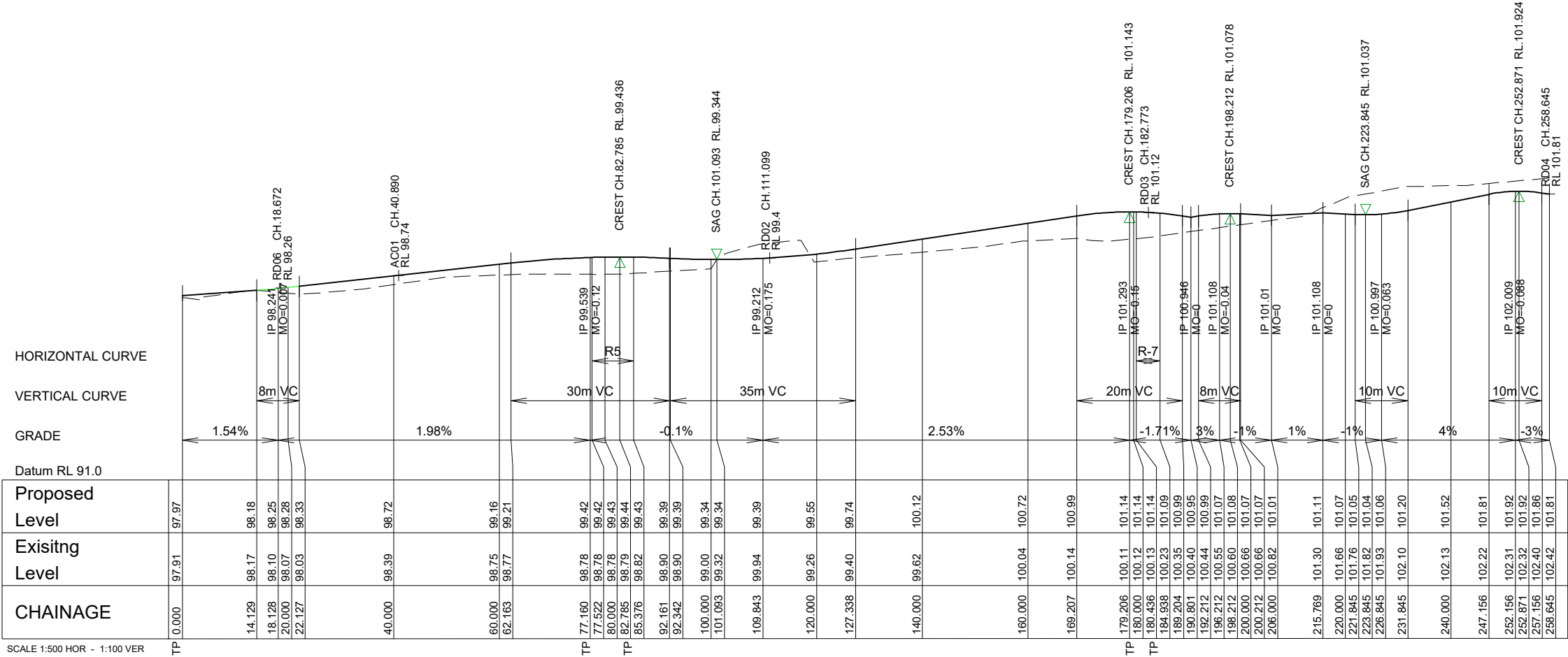
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Client
Gregory Hills
Corporate Park

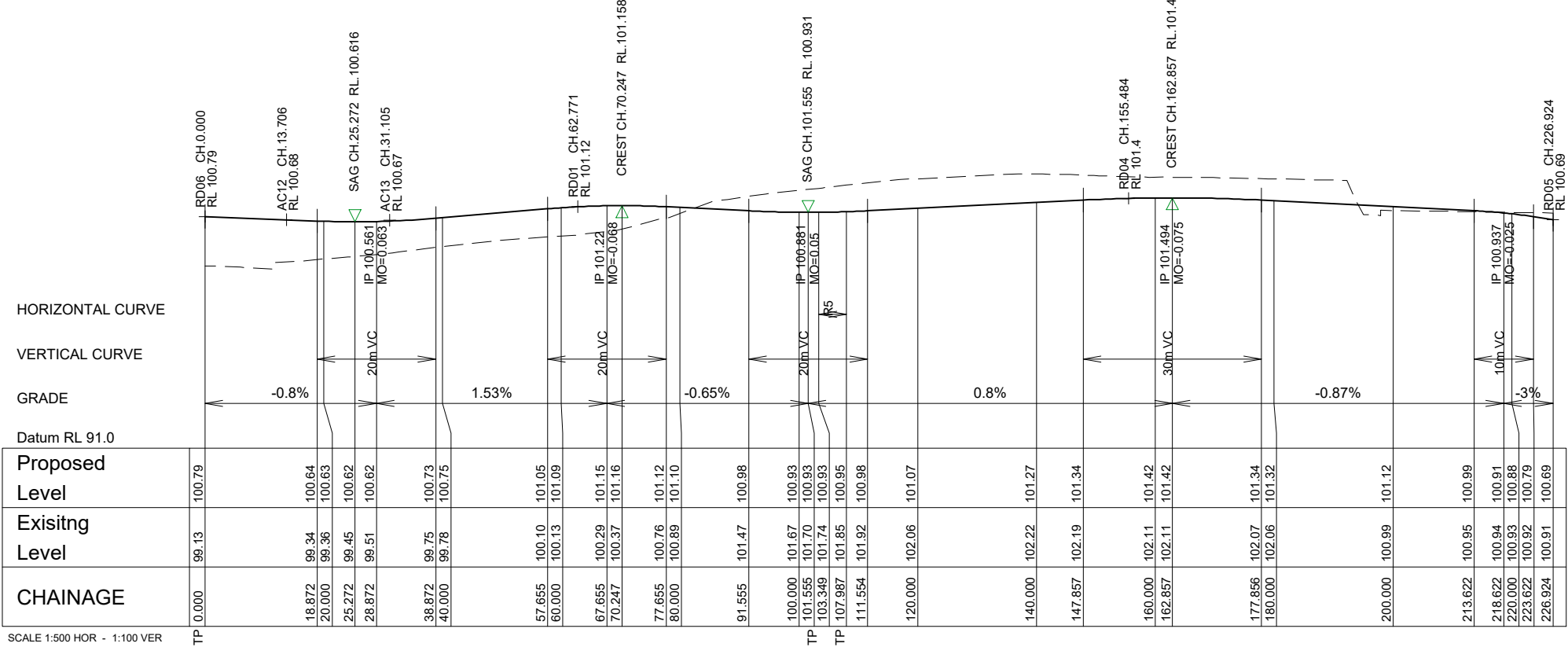
Title
SOMA Lifestyle
Development Application

Linemarking and Signposting Plan
Sheet 1

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	A.Paciben	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	1:500	Status	PRE
Drawing Number	MMD-369626-C-DR-CB-DA-0501	Rev	P4
		Security	STD



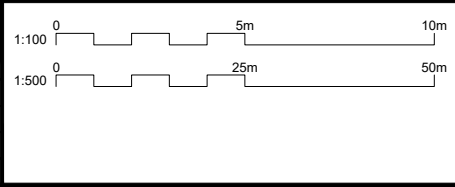
LONGITUDINAL SECTION ALONG RD01



LONGITUDINAL SECTION ALONG RD03

Preliminary - Not For Construction

Rev	Date	Drawn	Description	Ch'k'd	App'd
P4	25.10.17	GAP	Re-Issued for DA - Revised Layout	SR	JG
P3	07.07.17	PDC	Issued for Development Application	SR	JG
P2	16.12.16	MMc	Issued for Development Application	SR	JG
P1	15.12.16	MMc	Issued for Client Review	SR	-



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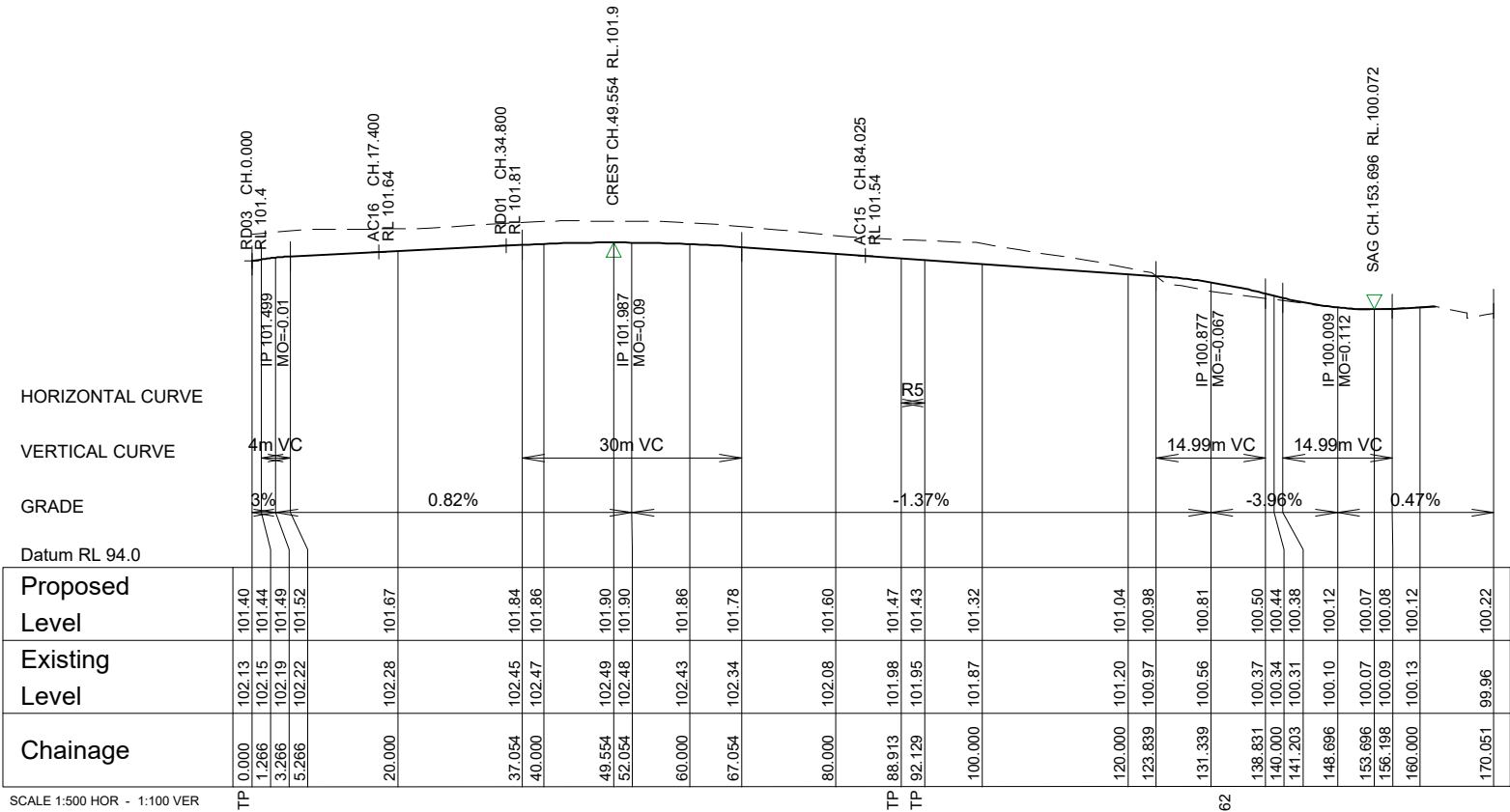
Gregory Hills
Corporate Park

Title

SOMA Lifestyle
Development Application

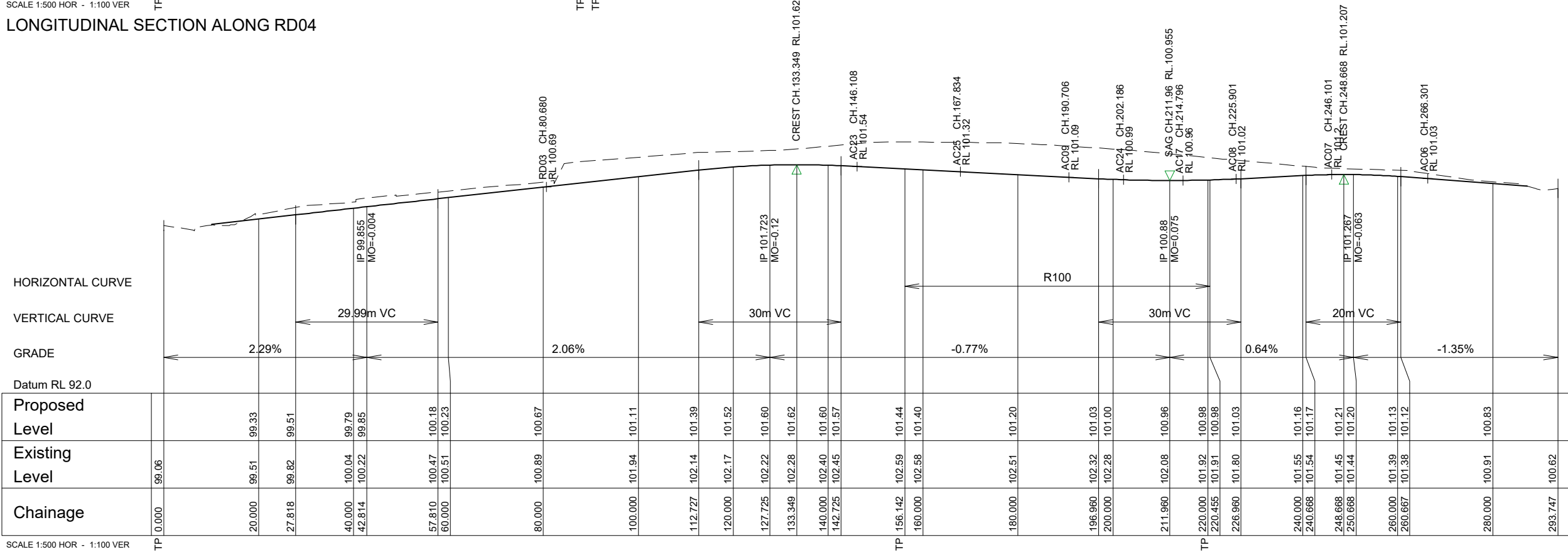
Road Longitudinal Section
Sheet 1

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	A.Paciben	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	Status	Rev	Security
As Shown	PRE	P4	STD
Drawing Number	MMD-369626-C-DR-CB-DA-0601		



SCALE 1:500 HOR - 1:100 VER

LONGITUDINAL SECTION ALONG RD04



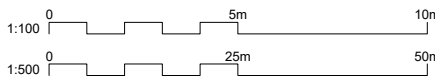
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LONGITUDINAL SECTION ALONG RD05

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P3	07.07.17	PDC	Issued for Development Application	SR	JG
P2	16.12.16	MMc	Issued for Development Application	SR	JG
P1	15.12.16	MMc	Issued for Client Review	SR	-



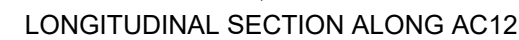
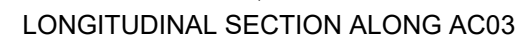
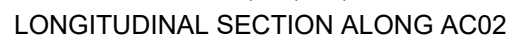
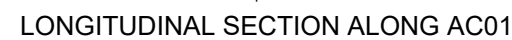
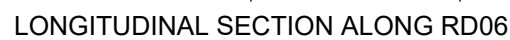
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Title
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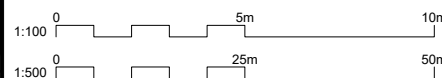
Road Longitudinal Section
Sheet 2

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	A.Paciben	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	Status	Rev	Security
As Shown	PRE	P4	STD
Drawing Number	MMD-369626-C-DR-CB-DA-0602		



Designed	P.Cavanagh		Eng check	S. Reilly	
Drawn	A.Paciben		Coordination	S. Reilly	
Dwg check	A.Singh		Approved	J.Gilligan	
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As Shown	PRE		P4	STD	
Drawing Number					
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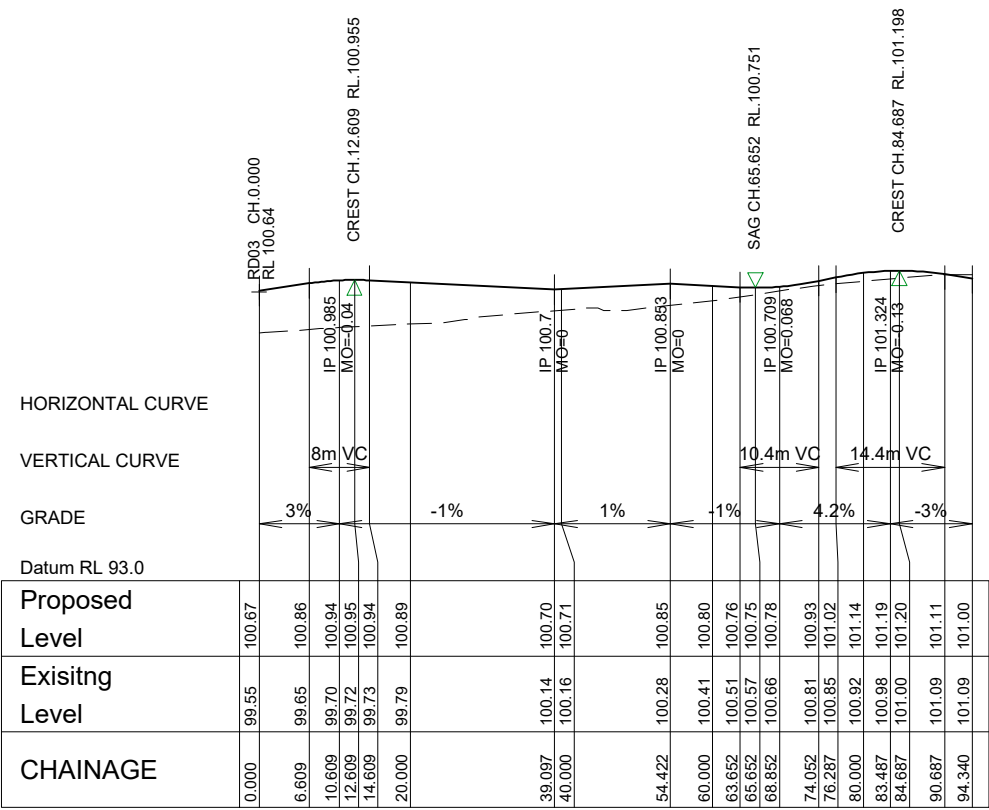
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P3	07.07.17	PDC	Issued for Development Application	SR	JG
P2	16.12.16	MMC	Issued for Development Application	SR	JG
P1	15.12.16		Not Issued		
Rev	Date	Drawn	Description	Ch'k'd	App'd



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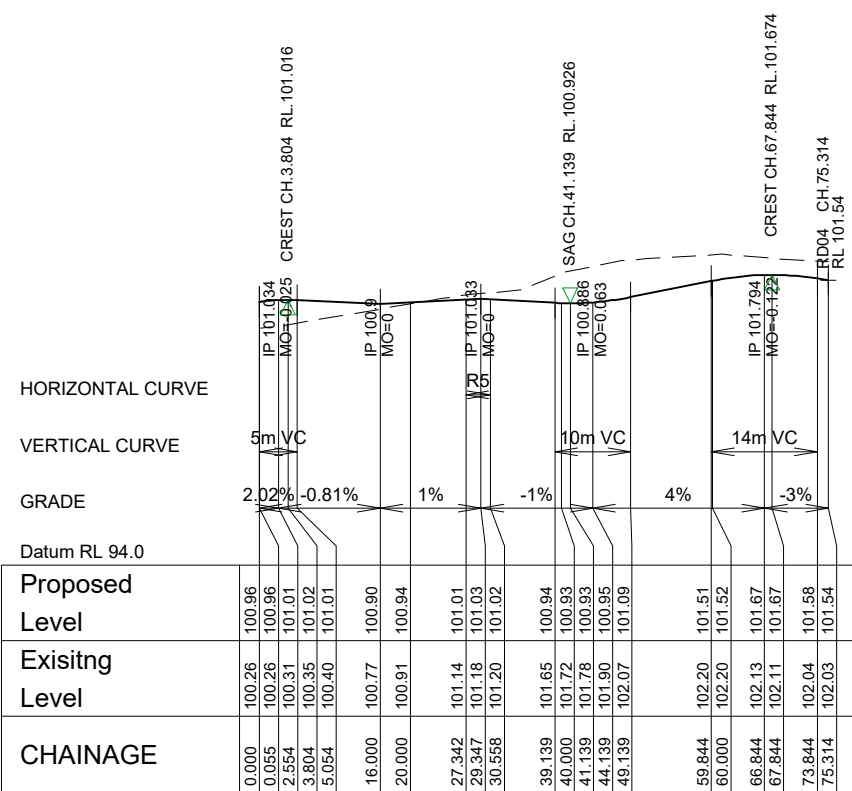
Client
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Corporate Park

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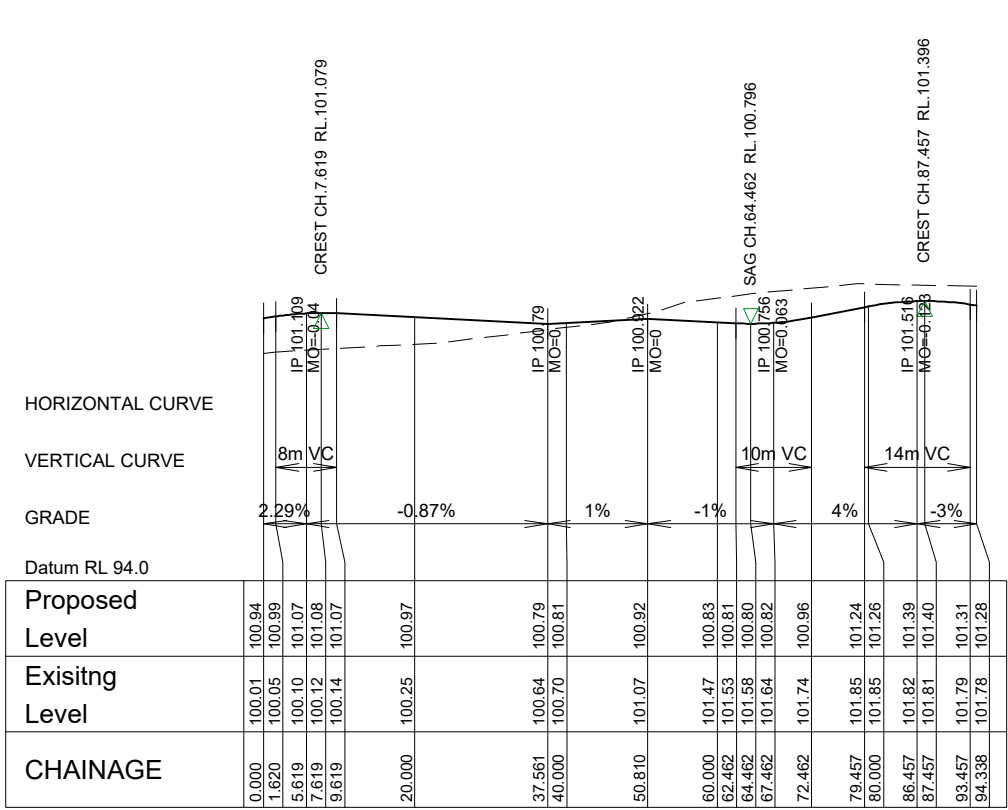
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LONGITUDINAL SECTION ALONG AC13



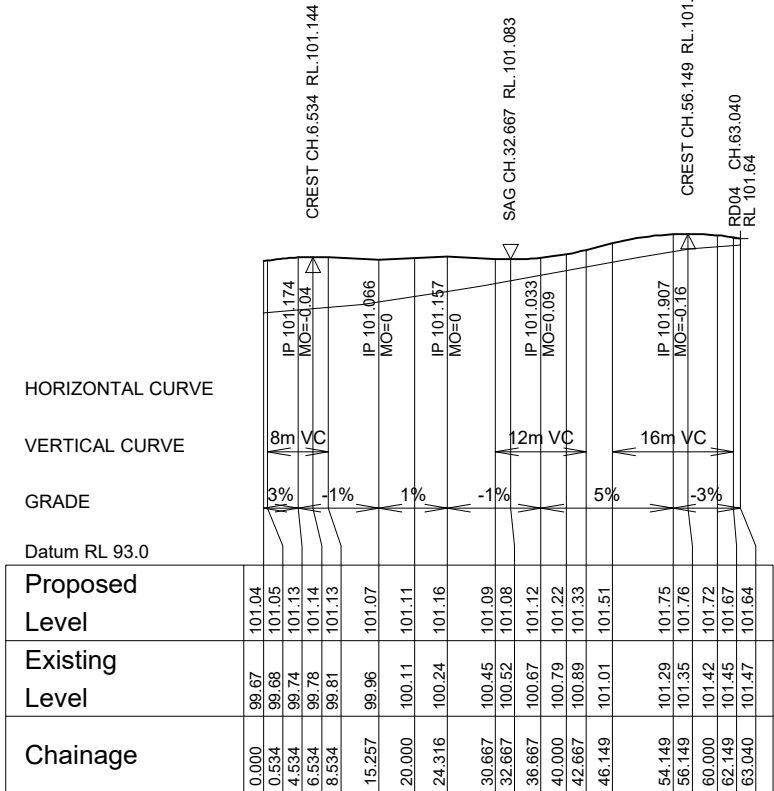
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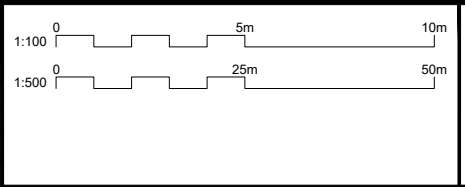


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LONGITUDINAL SECTION ALONG AC16

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Rev	Date	Drawn	Description	Ch'k'd	App'd
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P3	07.07.17	PDC	Issued for Development Application	SR	JG
P2	16.12.16	MMc	Issued for Development Application	SR	JG
P1	15.12.16		Not Issued		



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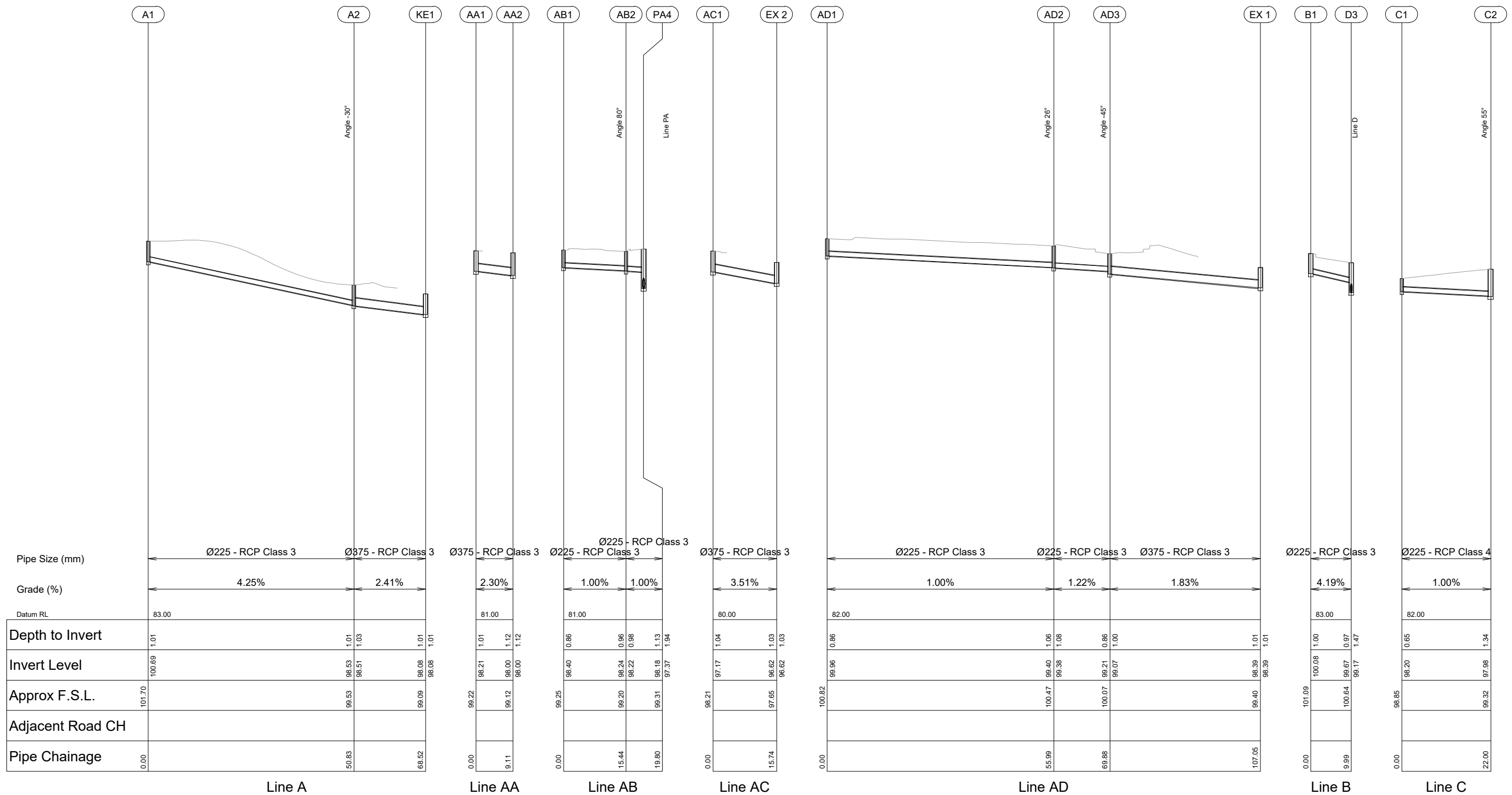
**Gregory Hills
Corprorate Park**

Title

**SOMA Lifestyle
Development Application**

Road Longitudinal Section
Sheet 4

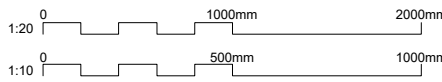
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Drawn	A.Paciben	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	Status	Rev	Security
As Shown	PRE	P4	STD
Drawing Number MMD-369626-C-DR-CB-DA-0604			



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P3	07.07.17	PDC	Issued for Development Application	SR	JG
P2	16.12.16	MMC	Issued for Development Application	SR	JG
P1	15.12.16	MMC	Issued for Client Review	SR	-
Rev	Date	Drawn	Description	Ch k'd	App'd



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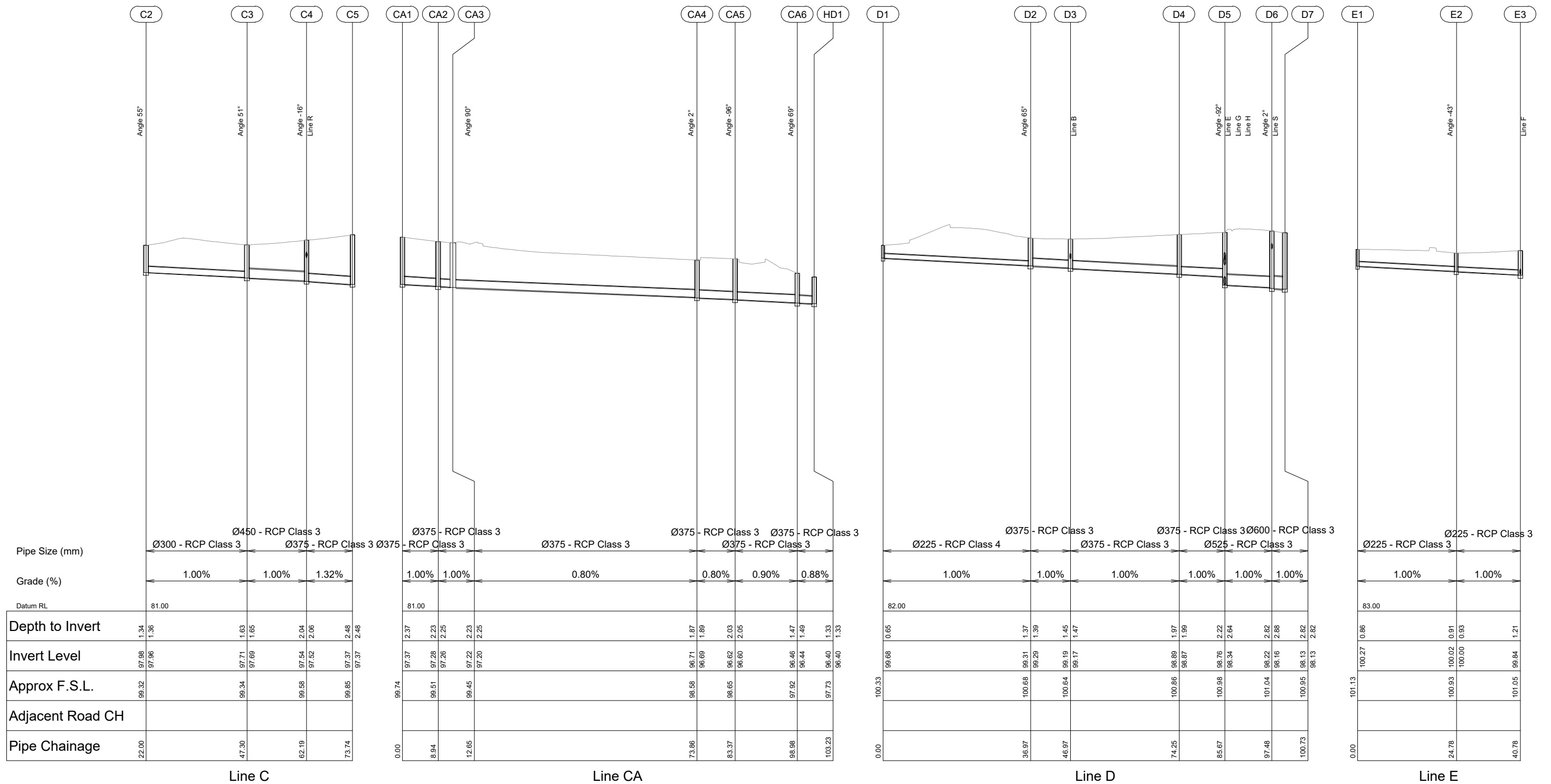
Client
Gregory Hills
Corporate Park

Title	SOMA Lifestyle Development Application
-------	--

Stormwater Longitudinal Section
Sheet 1

Designed	P.Cavanagh	Eng check	S. Reilly	
Drawn	A.Paciben	Coordination	S. Reilly	
Dwg check	A.Singh	Approved	J.Gilligan	
Scale at A1	Status	Rev	Security	
As Shown	PRE	P4	STD	
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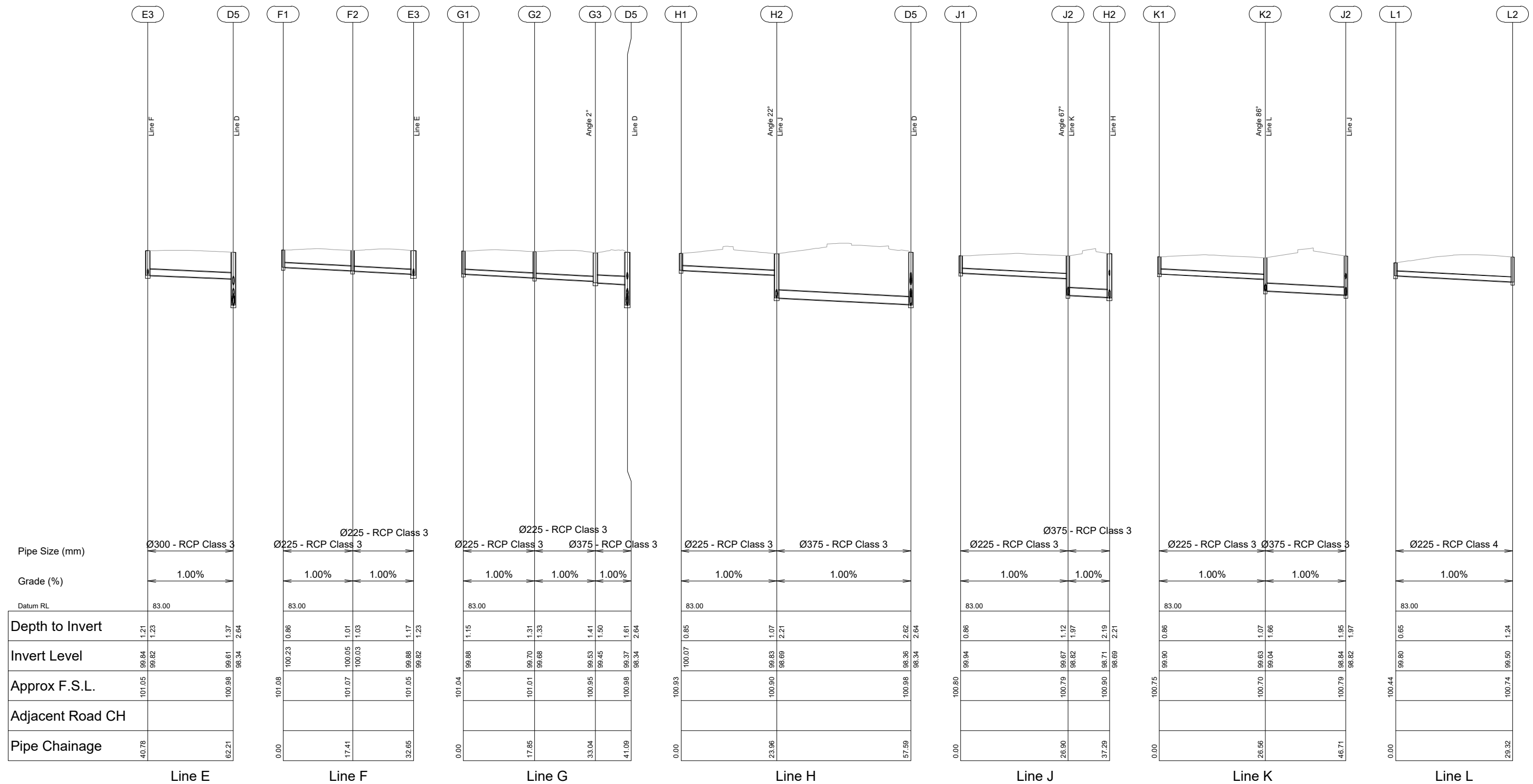
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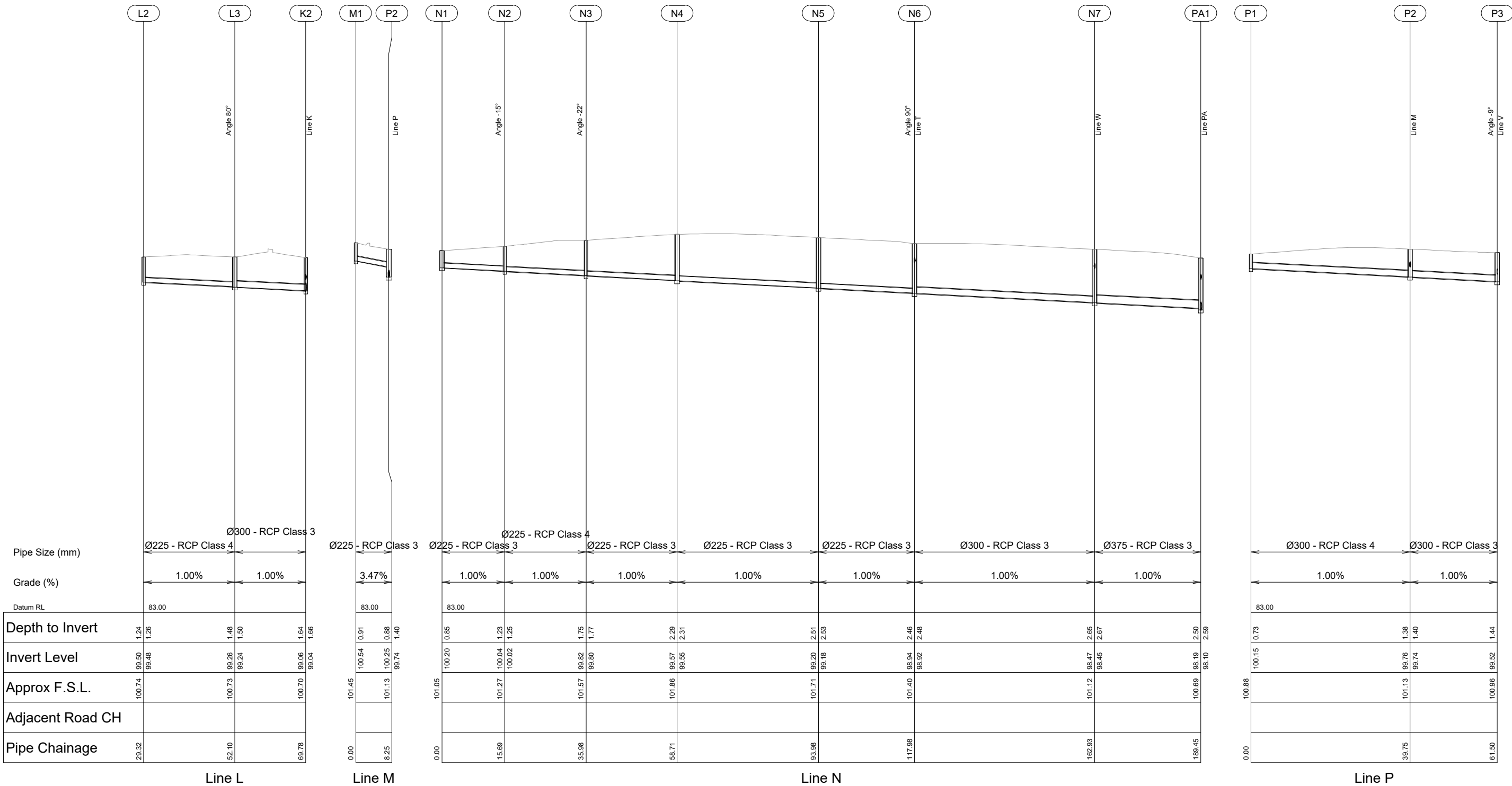
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P1	15.12.16	MMc	Issued for Client Review	SR	-



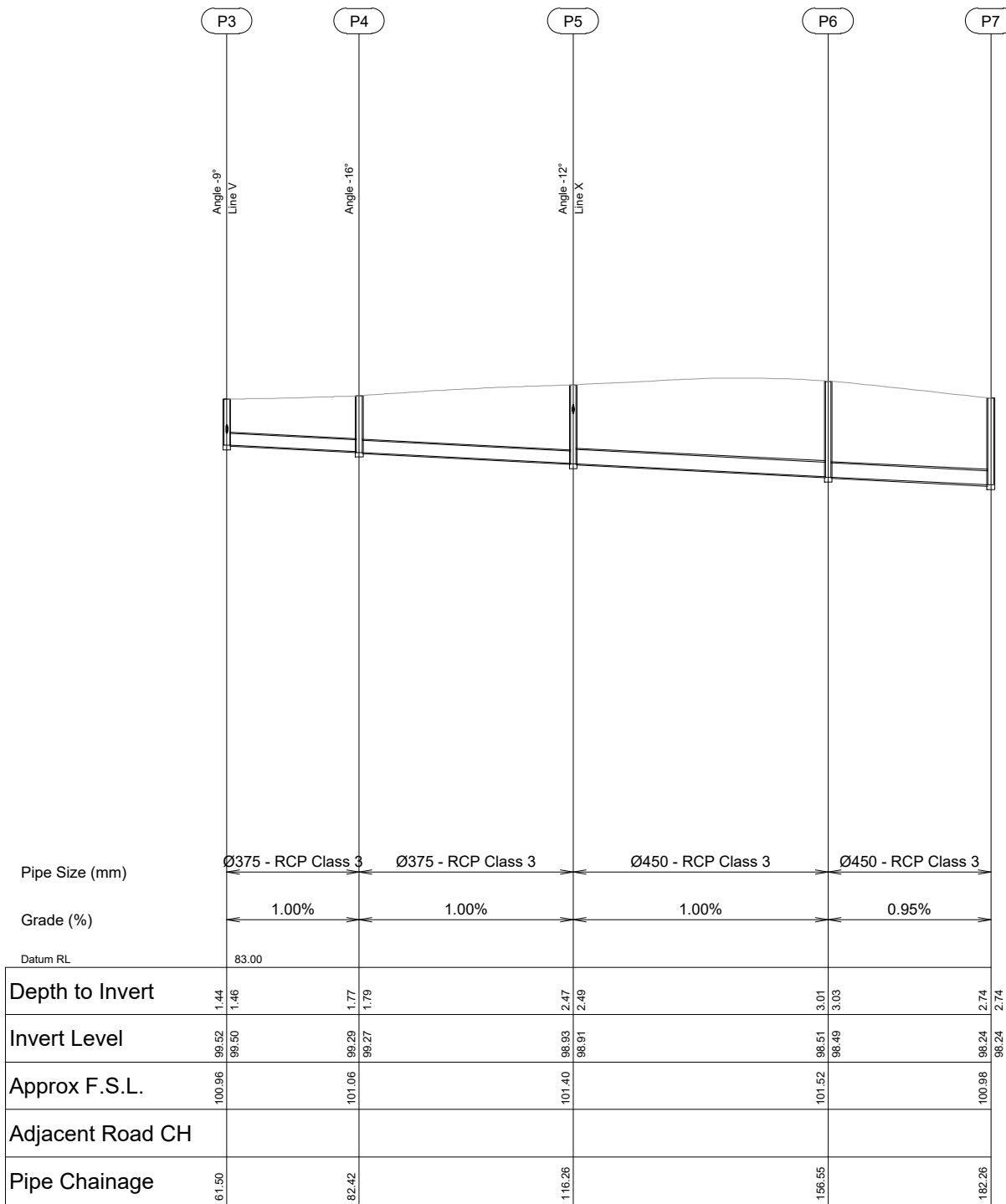
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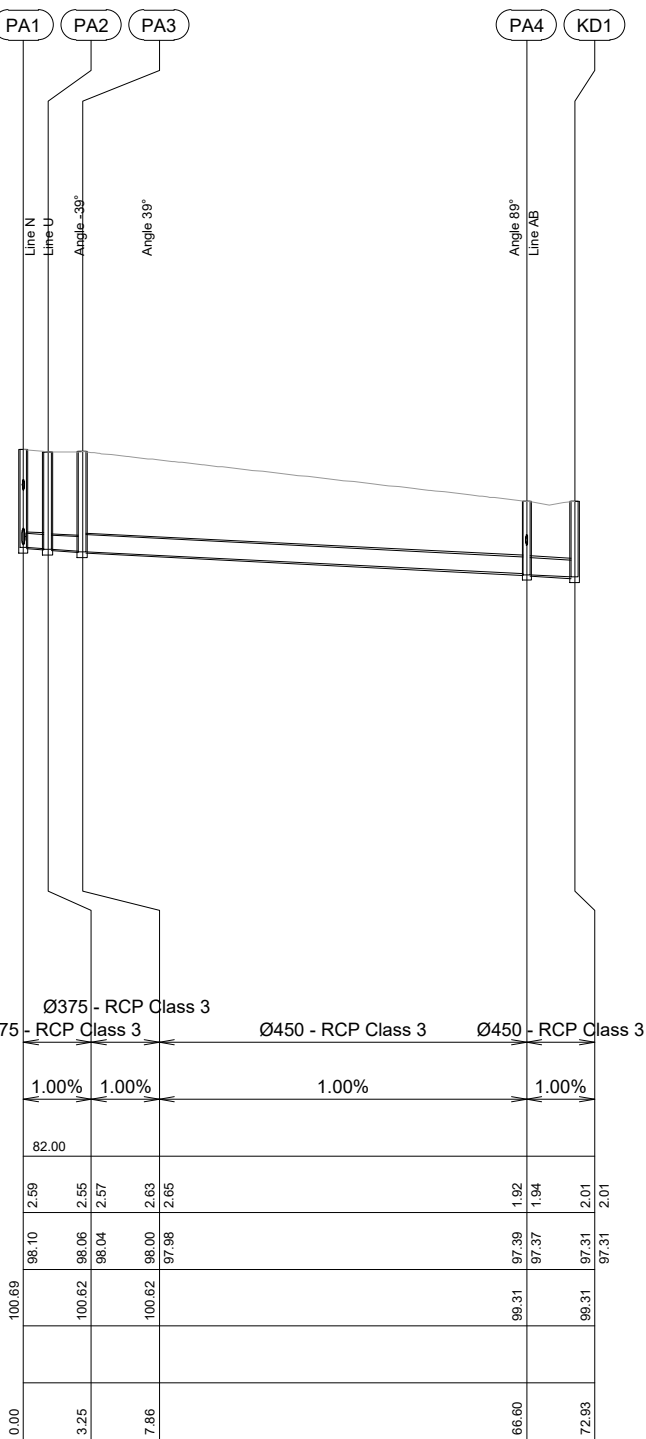
Title
SOMA Lifestyle
Development Application

Stormwater Longitudinal Section
Sheet 4

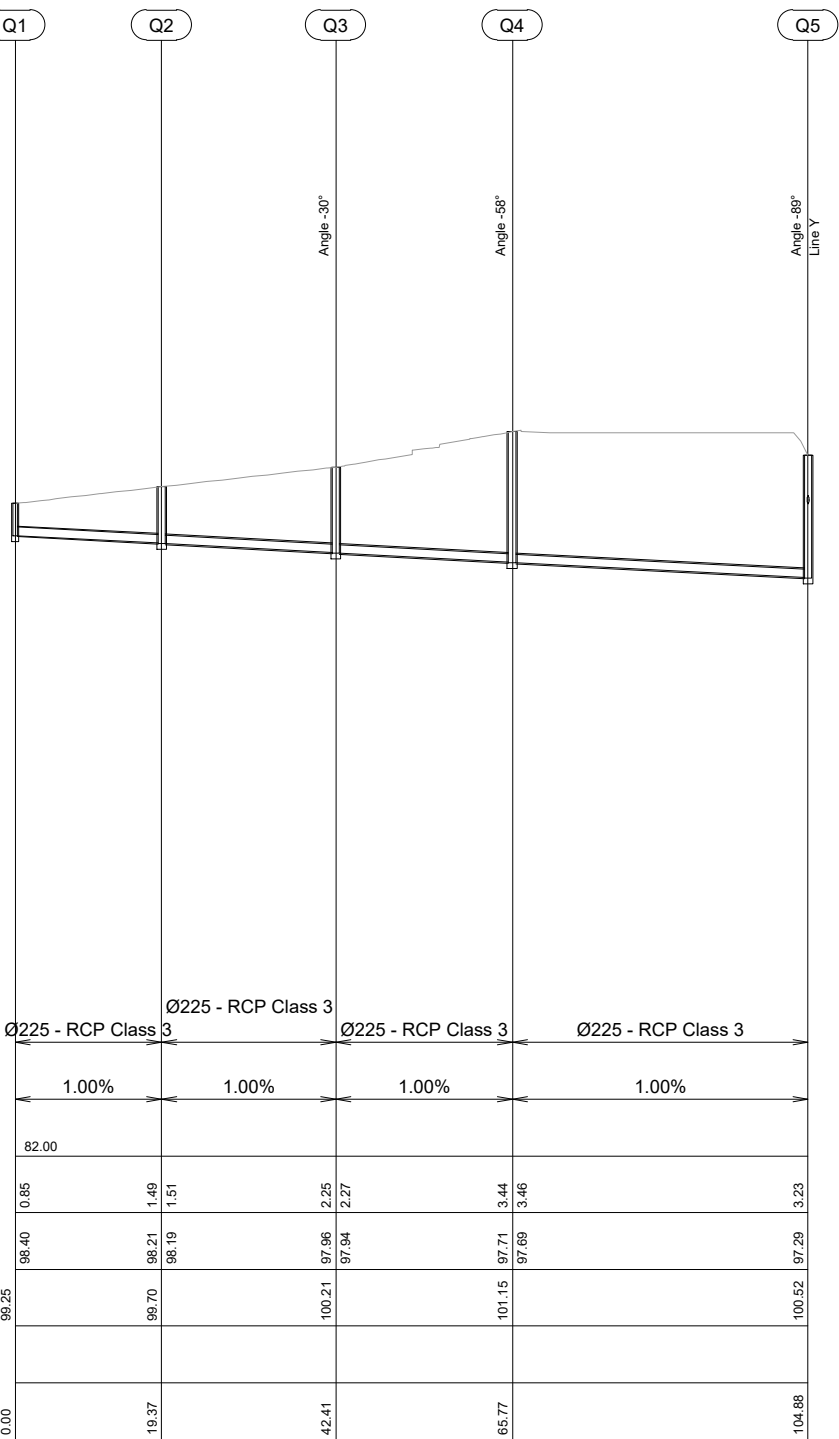
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Drawn	A.Paciben	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	Status	Rev	Security
As Shown	PRE	P4	STD
Drawing Number MMD-369626-C-DR-CB-DA-0704			



Pipe Size (mm)	Ø375 - RCP Class 3		Ø375 - RCP Class 3		Ø450 - RCP Class 3		Ø450 - RCP Class 3	
Grade (%)	1.00%		1.00%		1.00%		0.95%	
Datum RL	83.00							
Depth to Invert	1.44	1.46	1.77	1.79	2.47	2.49	3.01	2.74
Invert Level	99.52	99.50	99.29	99.27	98.93	98.91	98.51	98.24
Approx F.S.L.	100.96		101.06		101.40		101.52	100.98
Adjacent Road CH								
Pipe Chainage	61.50		82.42		116.26		156.55	182.26



75	Ø375 - RCP Class 3		Ø375 - RCP Class 3		Ø450 - RCP Class 3		Ø450 - RCP Class 3	
	1.00%		1.00%		1.00%		1.00%	
	62.00							
	2.59	2.55	2.57		2.63	2.65	1.92	2.01
	98.10	98.06	98.04		98.00	97.98	97.39	97.31
100.69		100.62		100.62		99.31		99.31
0.00		3.25		7.86		66.60		72.93



Ø225 - RCP Class 3		Ø225 - RCP Class 3		Ø225 - RCP Class 3		Ø225 - RCP Class 3	
1.00%		1.00%		1.00%		1.00%	
82.00							
0.85	1.49	1.51		2.25	2.27	3.44	3.23
98.40	98.21	98.19		97.96	97.94	97.71	97.29
99.25	99.70			100.21		101.15	100.52
0.00	19.37			42.41		65.77	104.88

Line P

Line PA

Line Q

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P1	15.12.16	MMc	Issued for Client Review	SR	-
Rev	Date	Drawn	Description	Ch'k'd	App'd



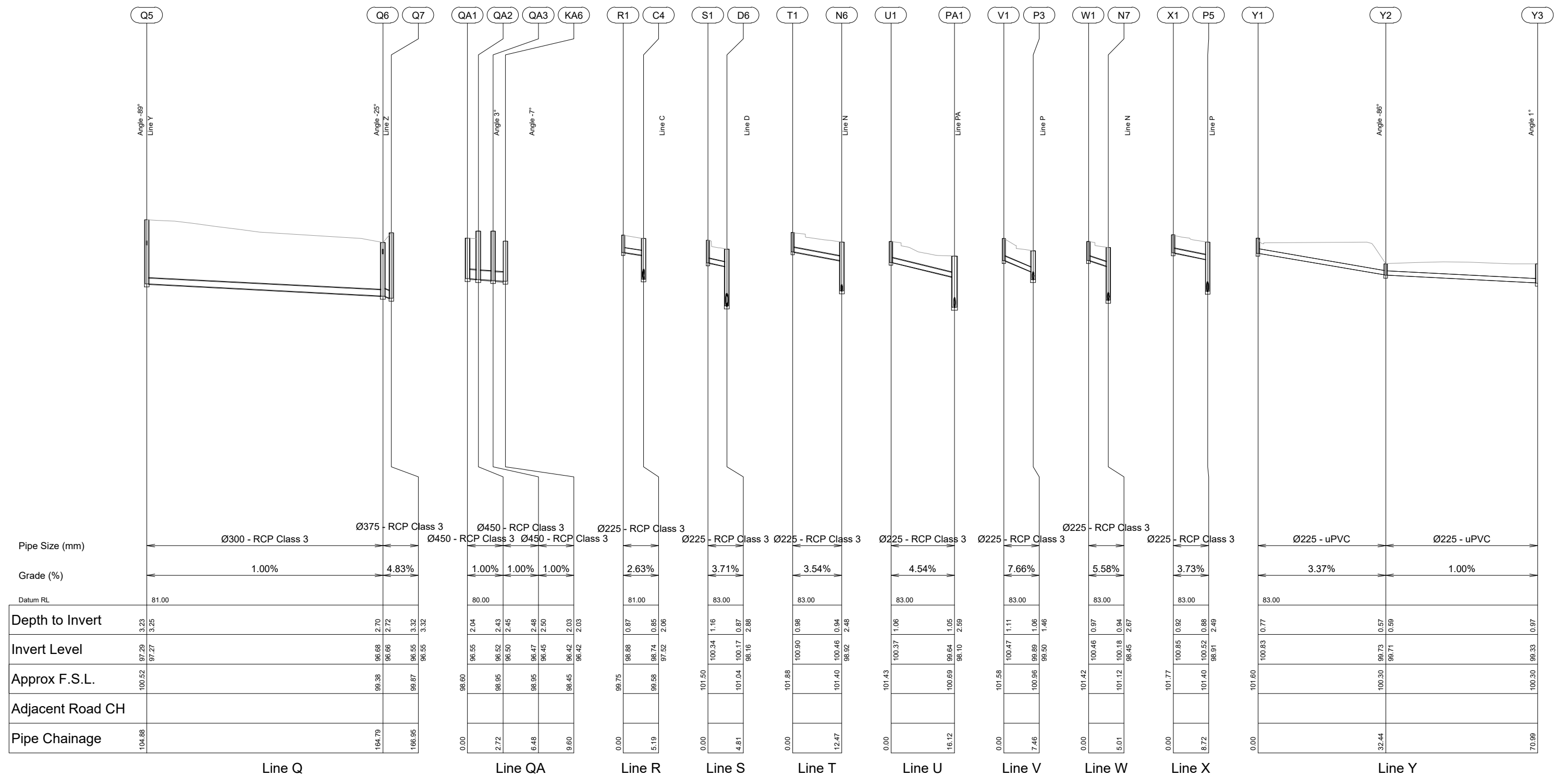
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Client
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Title
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Stormwater Longitudinal Section
Sheet 5

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	A.Paciben	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	Status	Rev	Security
As Shown	PRE	P4	STD
Drawing Number MMD-369626-C-DR-CB-DA-0705			



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P1	15.12.16	MMc	Issued for Client Review	SR	-
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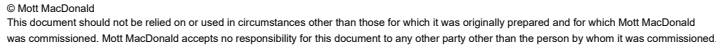
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Client	Gregory Hills Corporate Park
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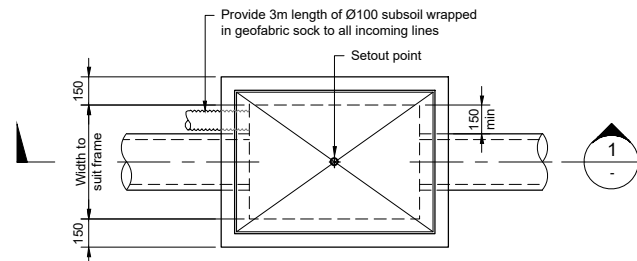
Title	SOMA Lifestyle Development Application
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Stormwater Longitudinal Section
Sheet 6

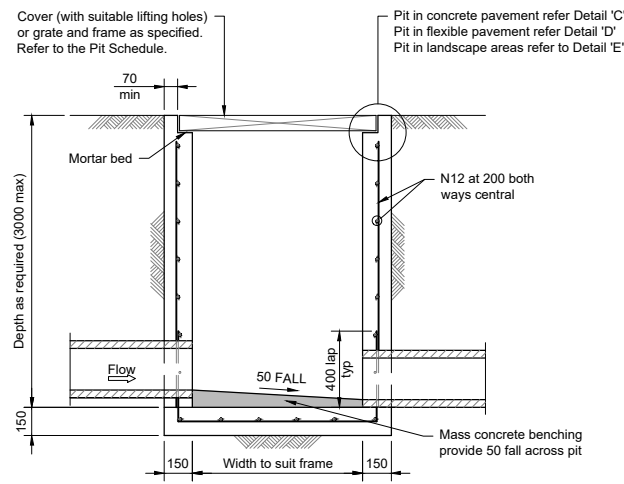
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Scale at A1	Status		Rev	Security	
As Shown	PRE		P4	STD	
Drawing Number					
MMD-369626-C-DR-CB-DA-0706					



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P4	25.10.17	GAP	Re-issued for DA - Revised Layout	SR	JG					Drawn	A.Paciben		Coordination	S. Reilly		
P3	07.07.17	PDC	Issued for Development Application	SR	JG					Dwg check	A.Singh		Approved	J.Gilligan		
P2	16.12.16	MMc	Issued for Development Application	SR	JG					Scale at A1	Status	Rev	Security			
P1	15.12.16	MMc	Issued for Client Review	SR	-					As Shown	PRE	P4	STD			
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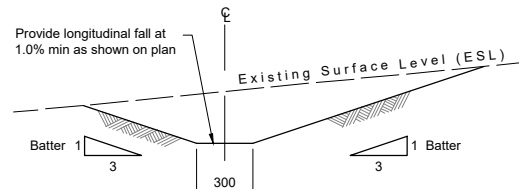


Plan
1:20

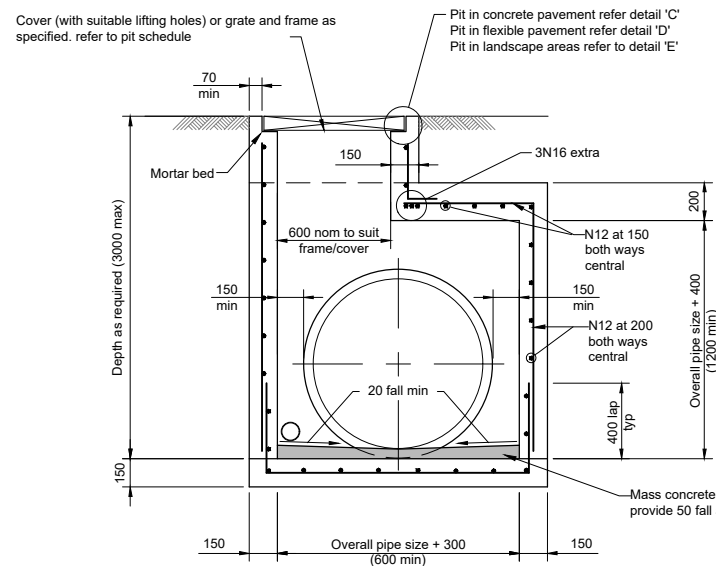


Section
1:20

Surface Inlet / Junction Pit
(pipe sizes ≤ Ø450)

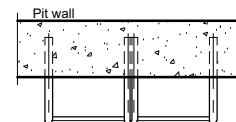


Catch Drain
1:20

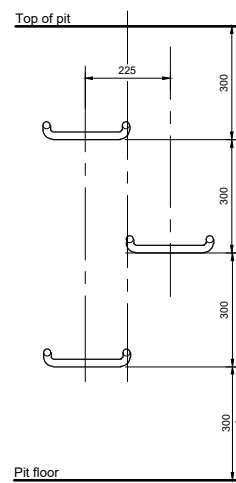


Section
1:20

Surface Inlet / Junction Pit
(pipe sizes > Ø450)

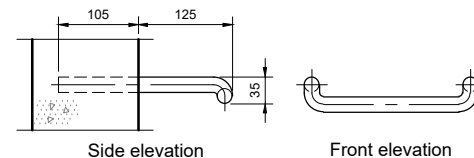


Plan



Elevation

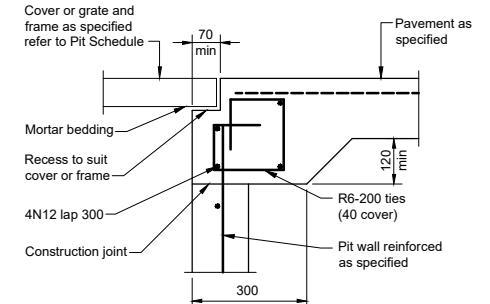
Step Iron
Placement To Pit Wall
NTS



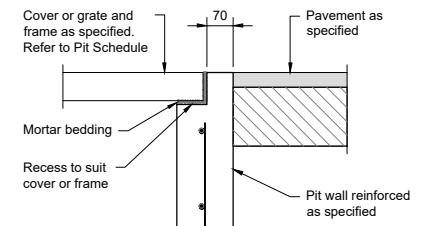
Side elevation

Front elevation

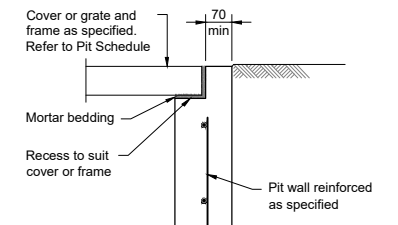
Step Iron Detail
1:5



Detail 'C'
1:10



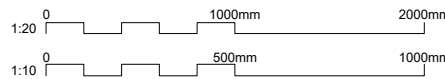
Detail 'D'
1:10



Detail 'E'
1:10

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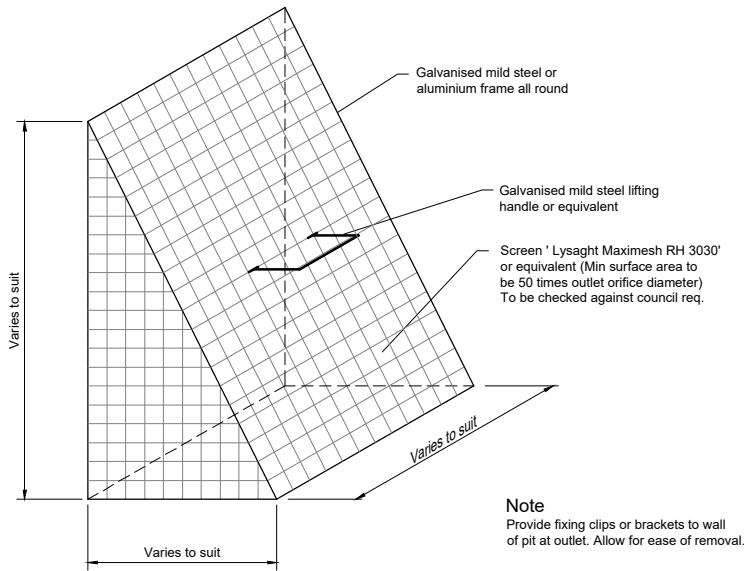
Client
**Gregory Hills
Corporate Park**

Title
**SOMA Lifestyle
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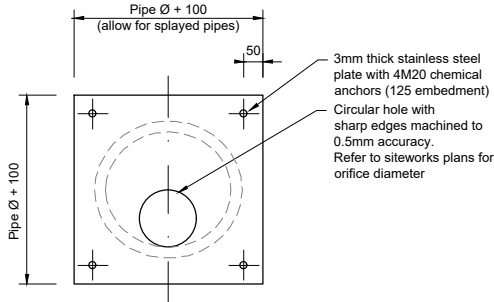
**Stormwater Drainage Details
Sheet 1**

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A. Singh	Approved	J. Gilligan
Scale at A1	Status	Rev	Security
As Shown	PRE	P3	STD
Drawing Number	MMD-369626-C-DR-CB-DA-0710		

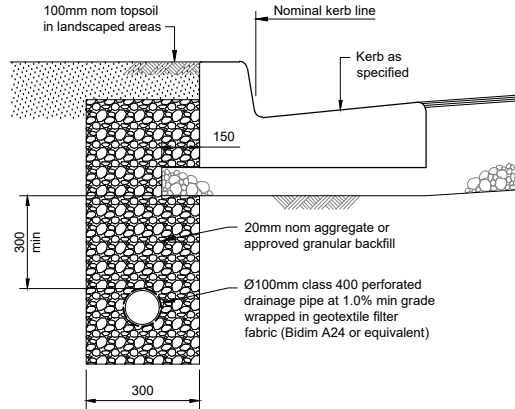
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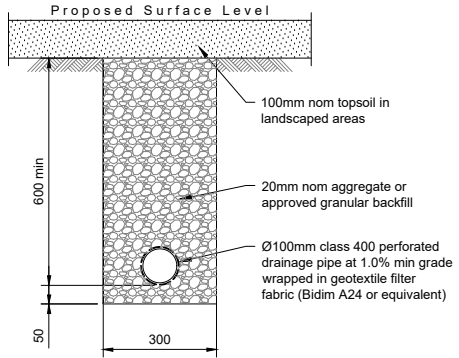
Typical Removable Screen Detail
NTS



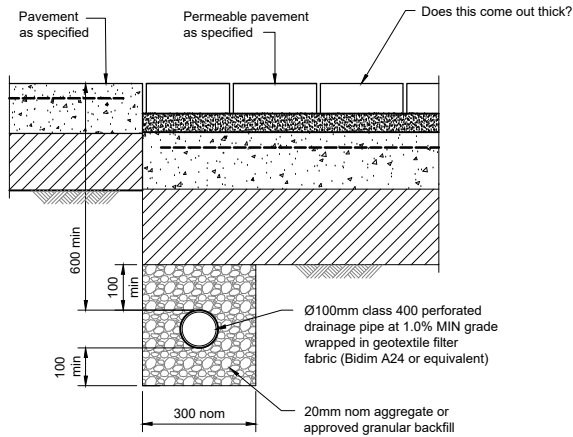
Orifice Plate
1:10



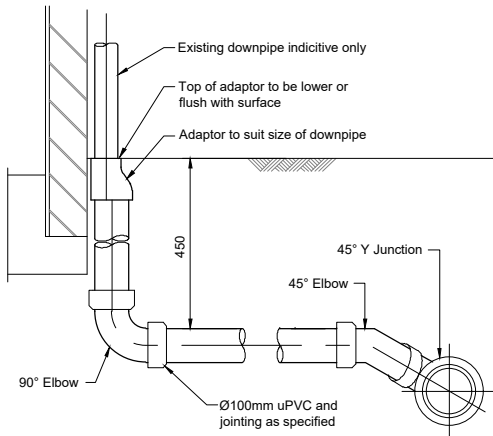
Subsoil Drainage Behind Kerbs
1:10



Subsoil Drainage in Landscaped Areas
1:10



Subsoil Drainage
under Permeable Pavement
1:10



PVC-U Downpipe Connection
1:10

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P1	15.12.16	MMc	Issued for Client Review	SR	-

1:10 0 500mm 1000mm



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Title
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**Stormwater Drainage Details
Sheet 2**

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
Scale at A1	Status	Rev	Security
As Shown	PRE	P3	STD
Drawing Number MMD-369626-C-DR-CB-DA-0711			

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Legend

Catchment Boundary

A1

0.0842ha

Catchment Node

Catchment Area

OSD Tank 2A

OSD Tank 2B

OSD Tank 3

Bypass

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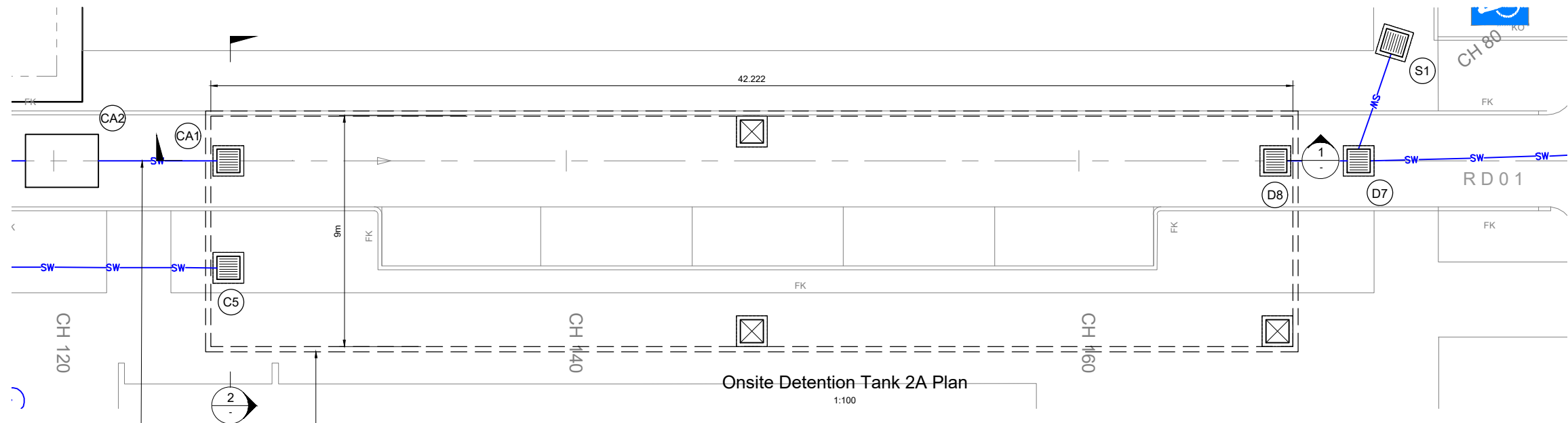
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Stormwater Catchment Plan

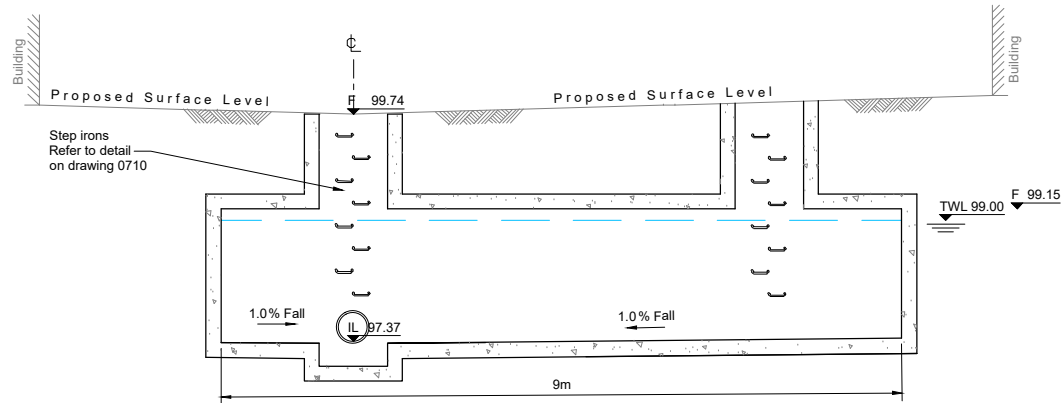
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Drawn	A.Paciben	Coordination	S. Reilly
Dwg check	A.Singh	Approved	J.Gilligan
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		Rev	P4
		Security	STD
Drawing Number MMD-369626-C-DR-CB-DA-0720			

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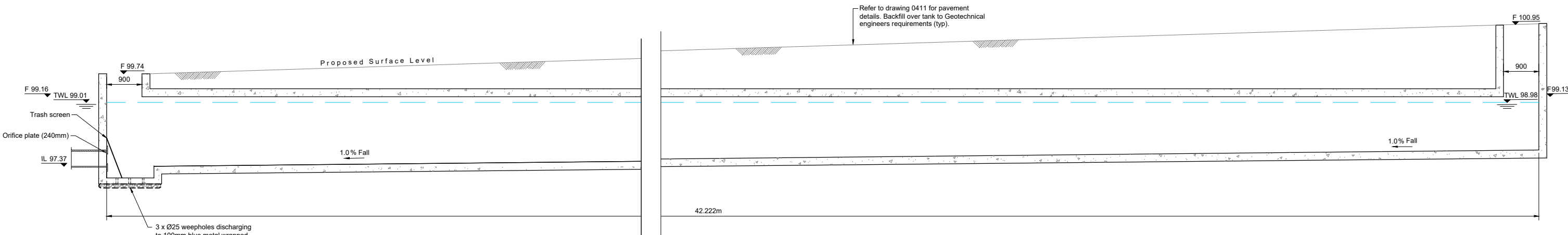


Detention Tank 2A - Details and layout to be confirmed during detailed design.
Surface Area = 380m²
Orifice Size = 240mm
Max Volume = 705m³

Construct Humes 'Humegard' GPT and Humes 'Jellyfish' or approved equivalent.

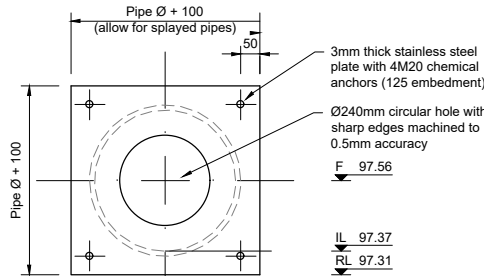


Section 2
1:50

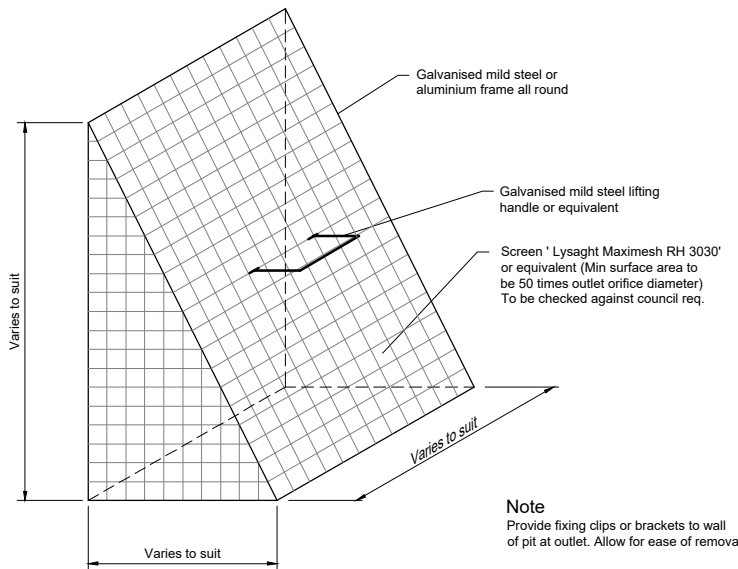


Section 1
1:50

Note
Detention volume = 705m³ to top water level.



Orifice Plate - Type A
1:10



Typical Removable Screen Detail
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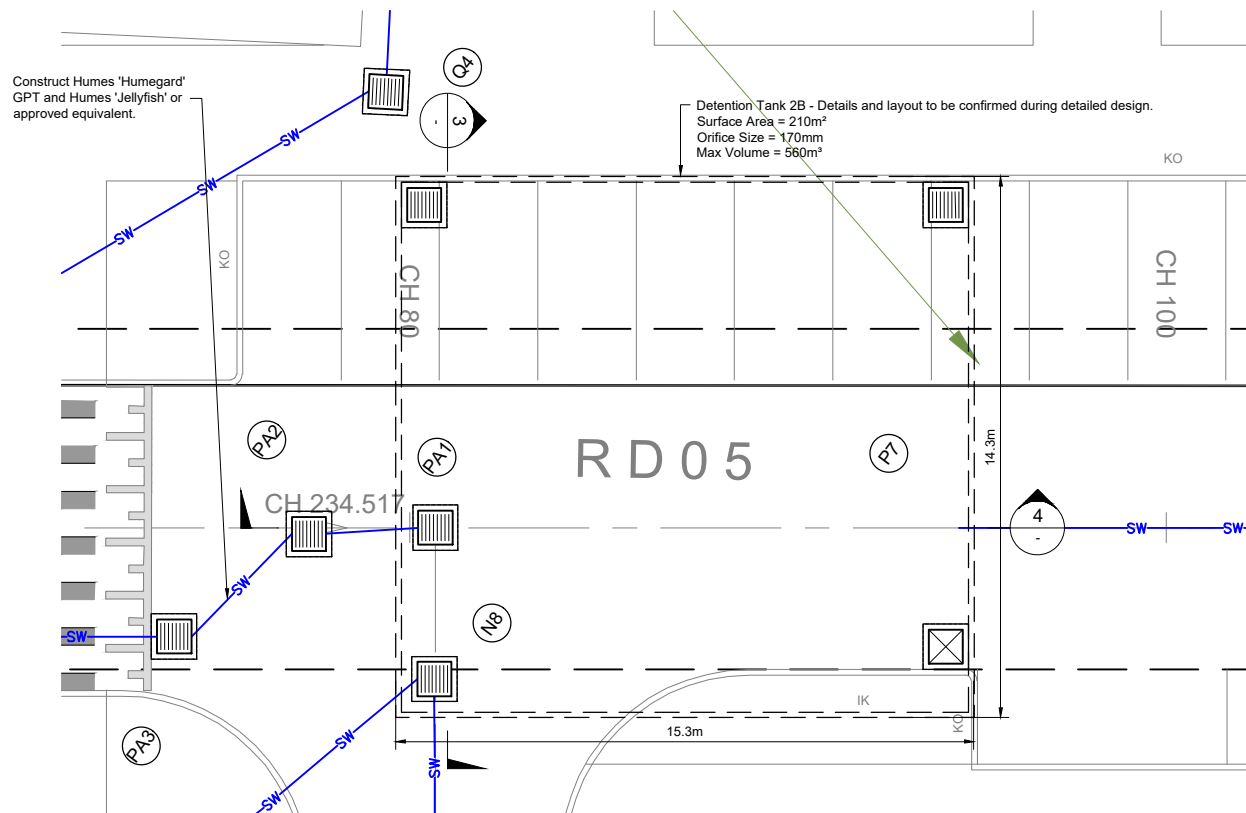
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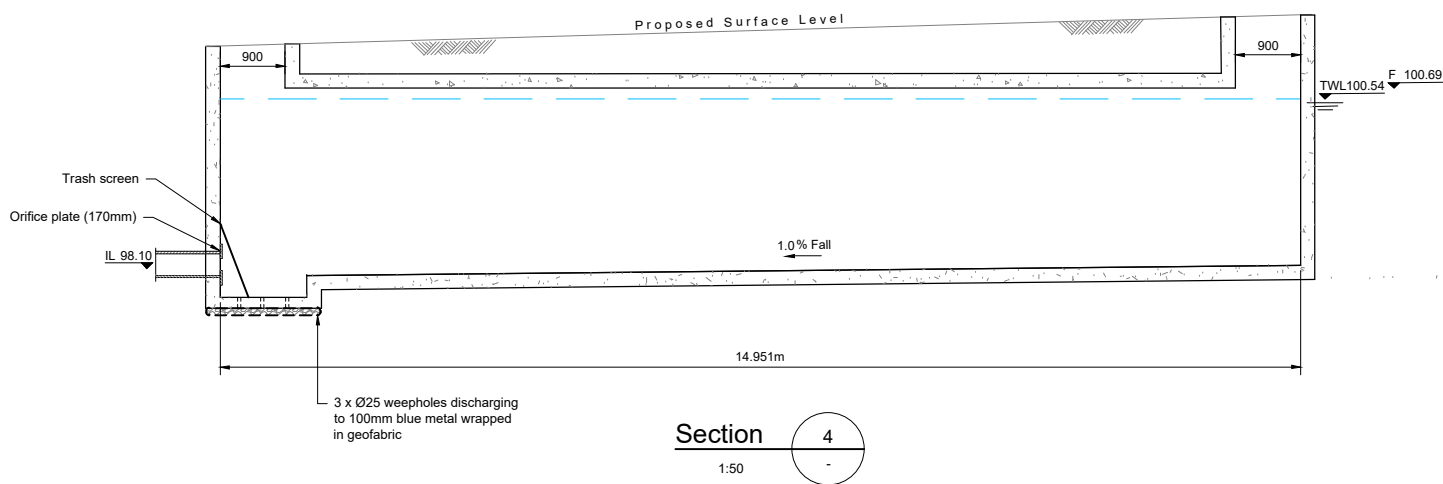
Onsite Detention Tank
Plan and Details Sheet 1

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A. Singh	Approved	J. Gilligan
Scale at A1	1:50, 10	Status	PRE
Rev	P2	Security	STD
Drawing Number MMD-369626-C-DR-CB-DA-0750			

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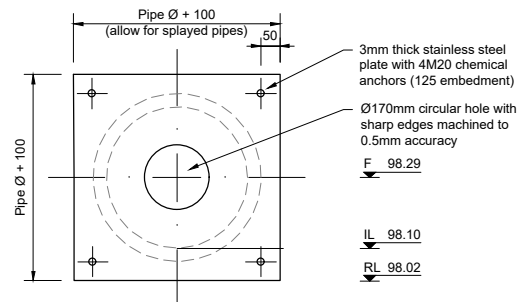


Onsite Detention 2B Tank Plan
1:100

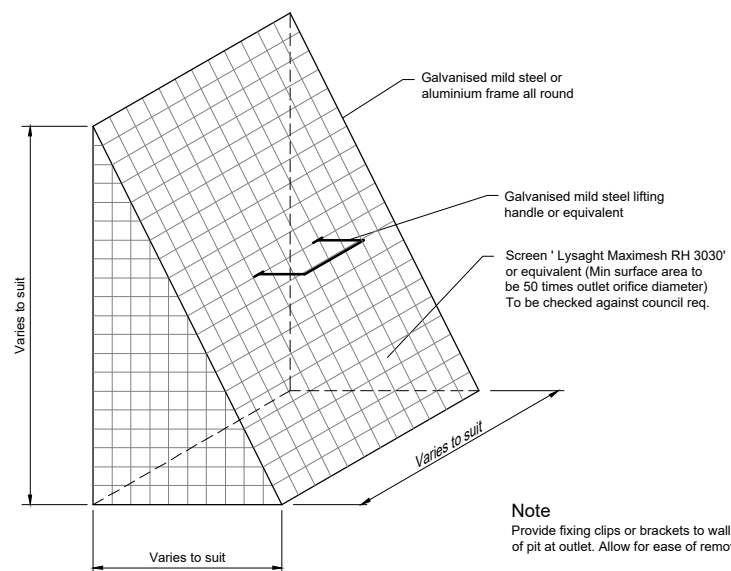


Section 4
1:50

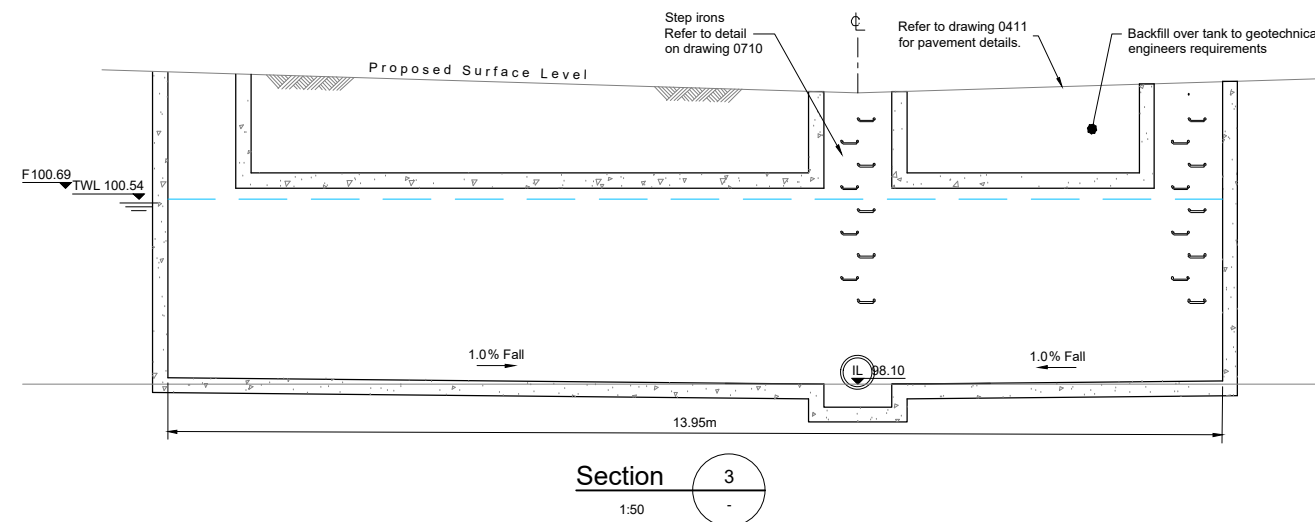
Note
Detention volume = 560m³ to top water level.



Orifice Plate - Type A
1:10



Typical Removable Screen Detail
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Section 3
1:50

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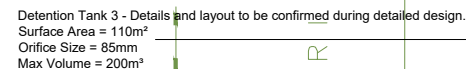
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**Onsite Detention Tank
Plan and Details Sheet 2**

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A. Singh	Approved	J. Gilligan
Scale at A1	Status	Rev	Security
1:50, 10	PRE	P2	STD
Drawing Number MMD-369626-C-DR-CB-DA-0751			



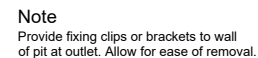
1:100

Technical drawing of a square plate with a central circular hole and four corner anchors. The plate is 100 units wide and 100 units high. The central hole has a diameter of 85mm. The plate is made of 3mm thick stainless steel. The drawing includes dimensions for the plate size, hole size, and anchor positions.

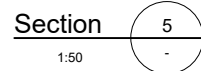
Dimensions and specifications:

- Plate size: 100 x 100 (Pipe Ø = 100)
- Central hole: Ø85mm circular hole with sharp edges machined to 0.5mm accuracy
- Material: 3mm thick stainless steel plate with 4M20 chemical anchors (125 embedment)
- Anchor positions: Four anchors located at the corners of the plate, 50 units from the edges.
- Leveling points: F 96.78, IL 96.55, RL 96.46

1:10



NTS



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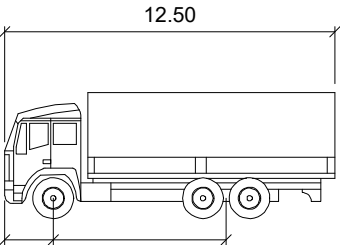
Client Gregory Hills
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Title	SOMA Lifestyle Development Application
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Onsite Detention Tank
Plan and Details Sheet 3

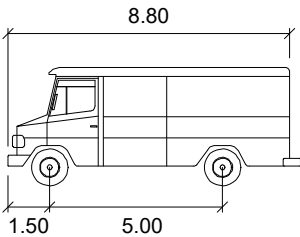
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Drawn	M. Mcrae		Coordination	S. Reilly	
Asgh check	A.Singh		Approved	J.Gilligan	
Scale at A1	Status		Rev	Security	
1:50, 10	PRE		P2	STD	
Drawing Number					
MMD-369626-C-DR-CB-DA-0752					

Vehicle Turn Path Legend	
	Vehicle and turn path control line
	Vehicle body
	Vehicle body clearance (0.3m)
	Vehicle, vehicle body and vehicle clearance
	Vehicle front tyres



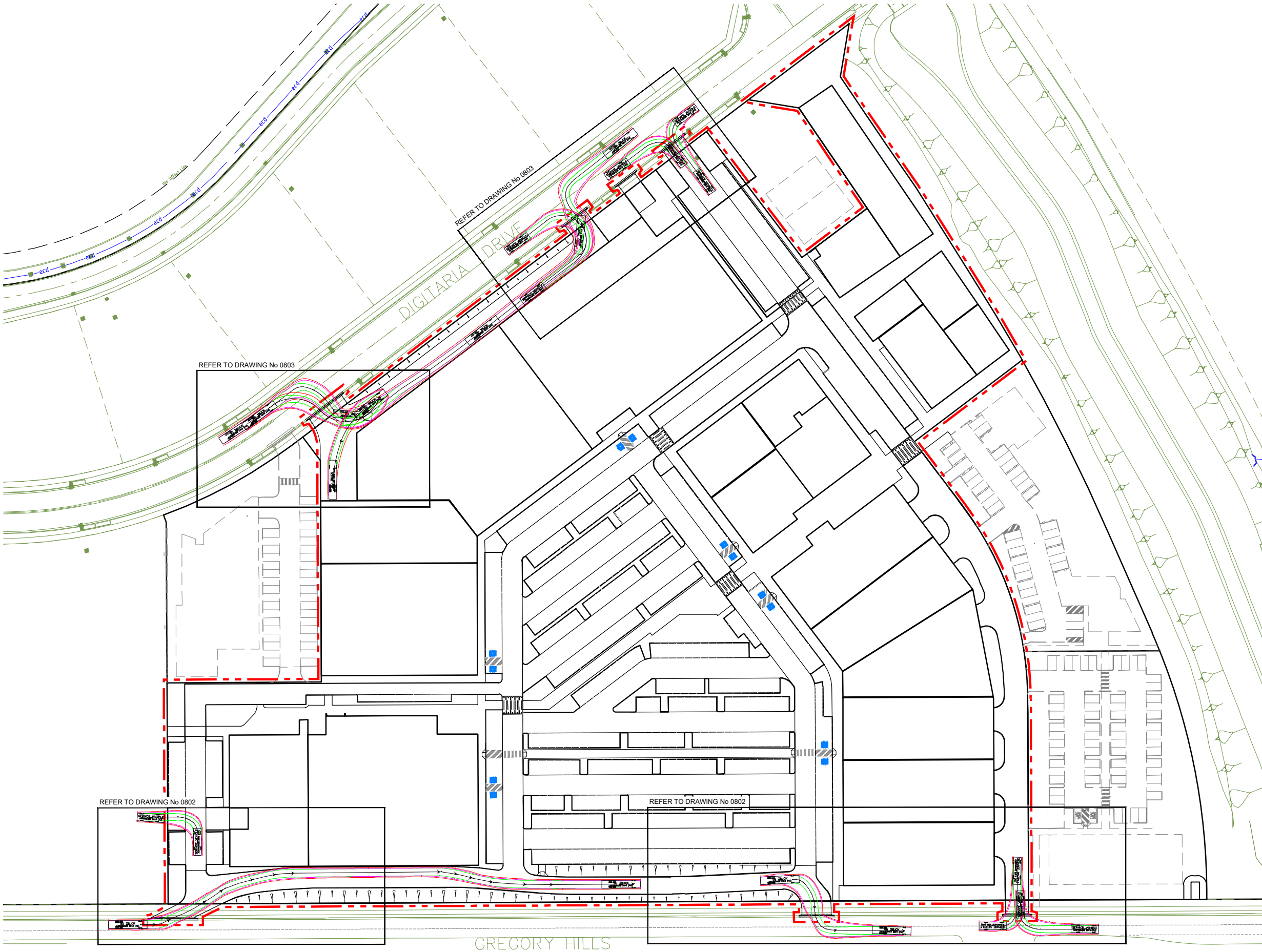
SU TRUCK

	metres
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6



SERVICE VEHICLE

	metres
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7



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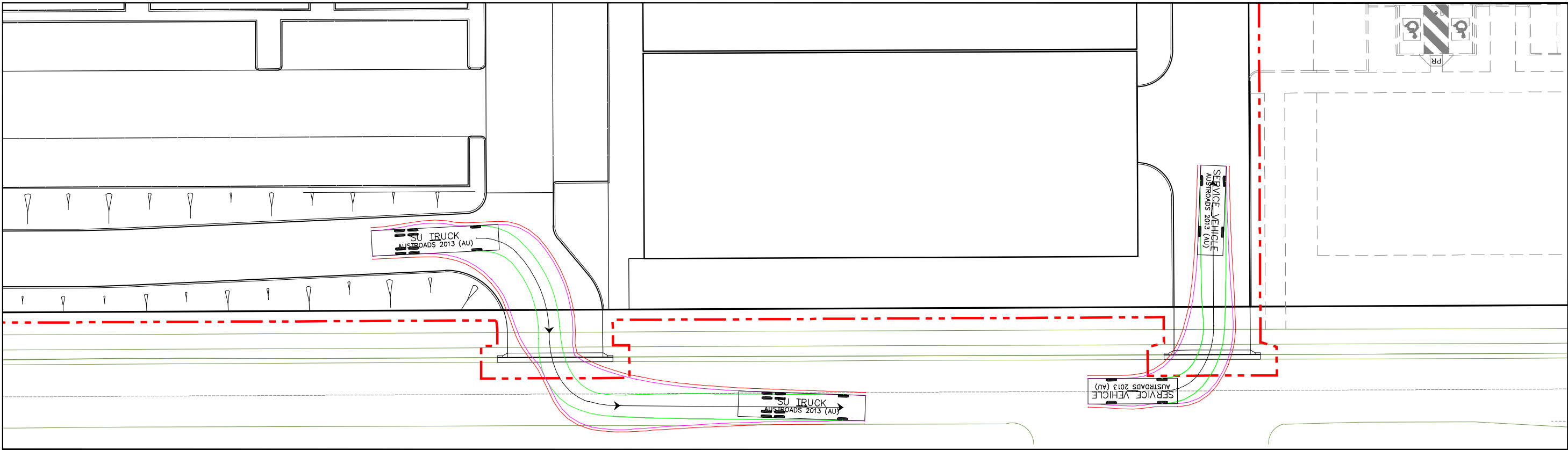
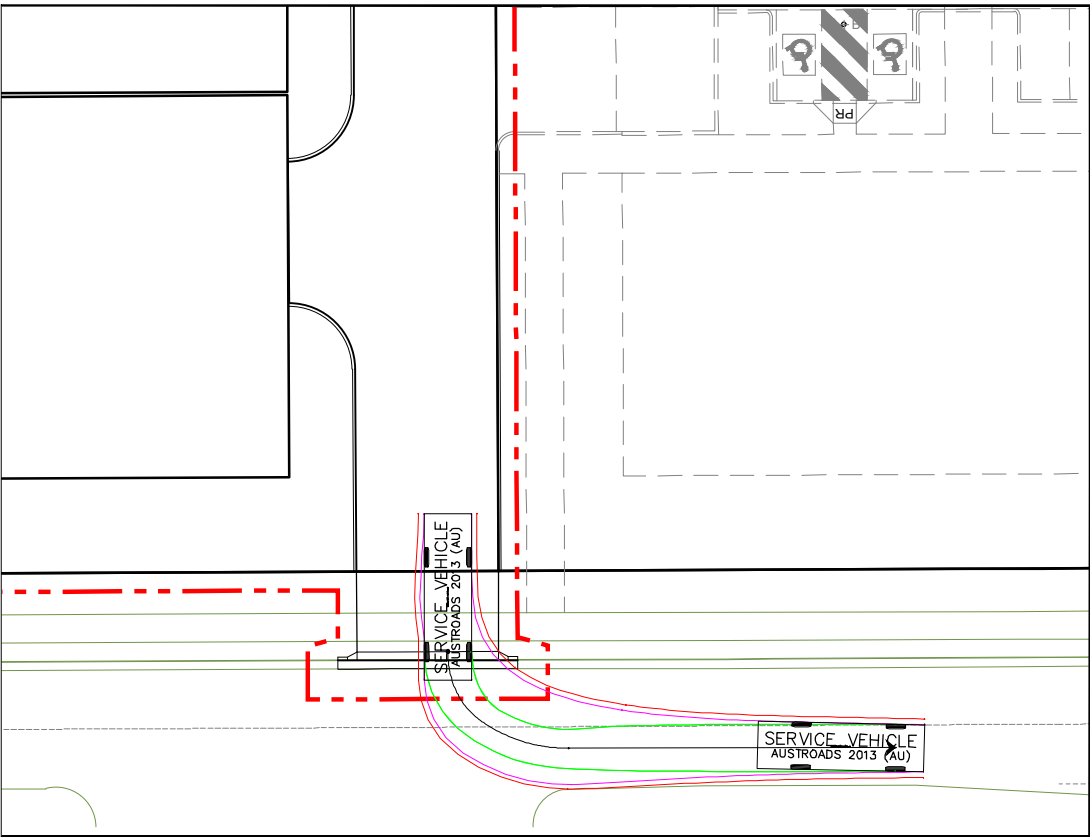
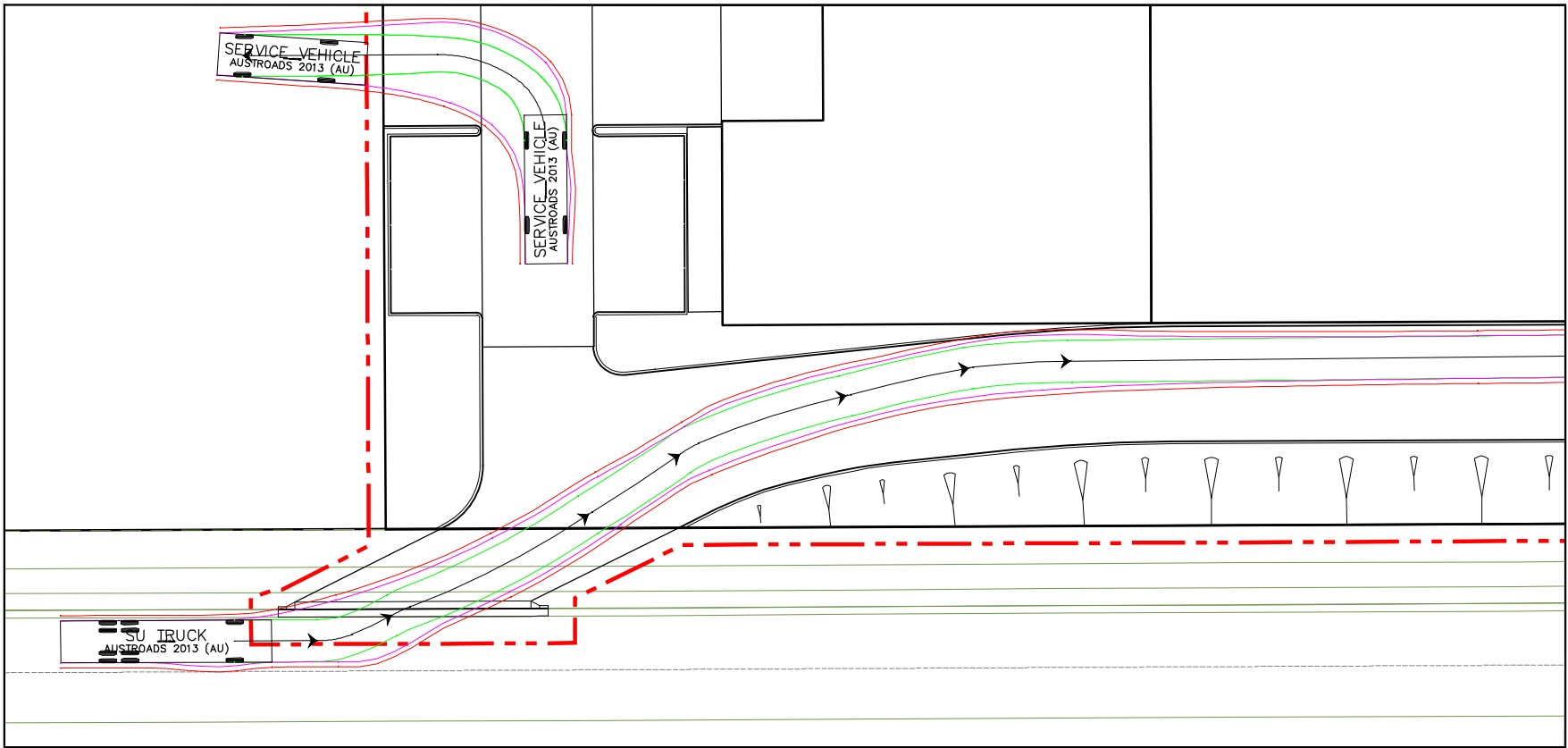
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Turning Path Plan
Sheet 1

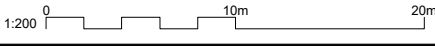
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Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A. Singh	Approved	J. Gilligan
Scale at A1	N/A	Status	PRE
Rev	P3	Security	STD
Drawing Number MMD-369626-C-DR-CB-DA-0801			



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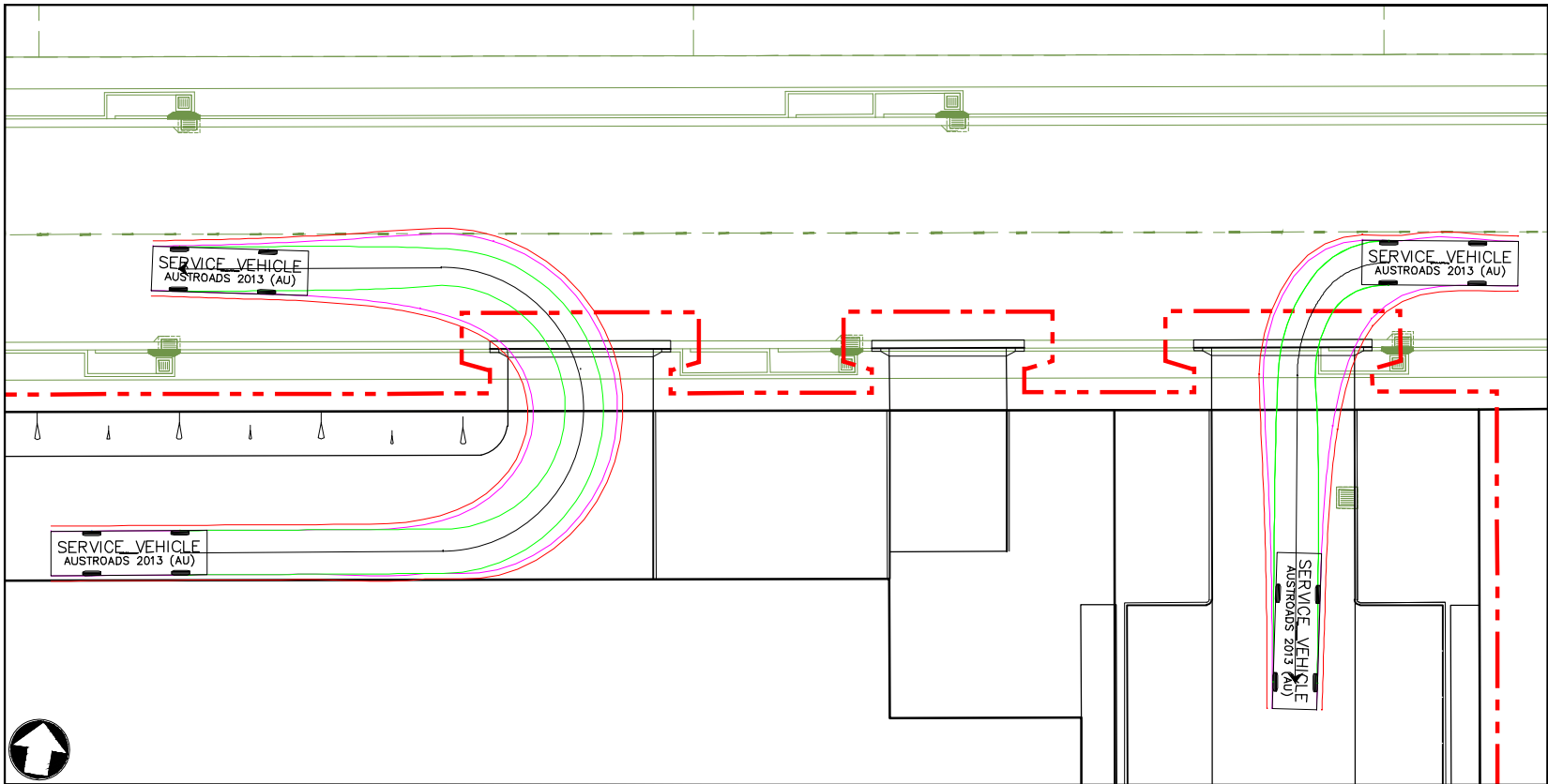
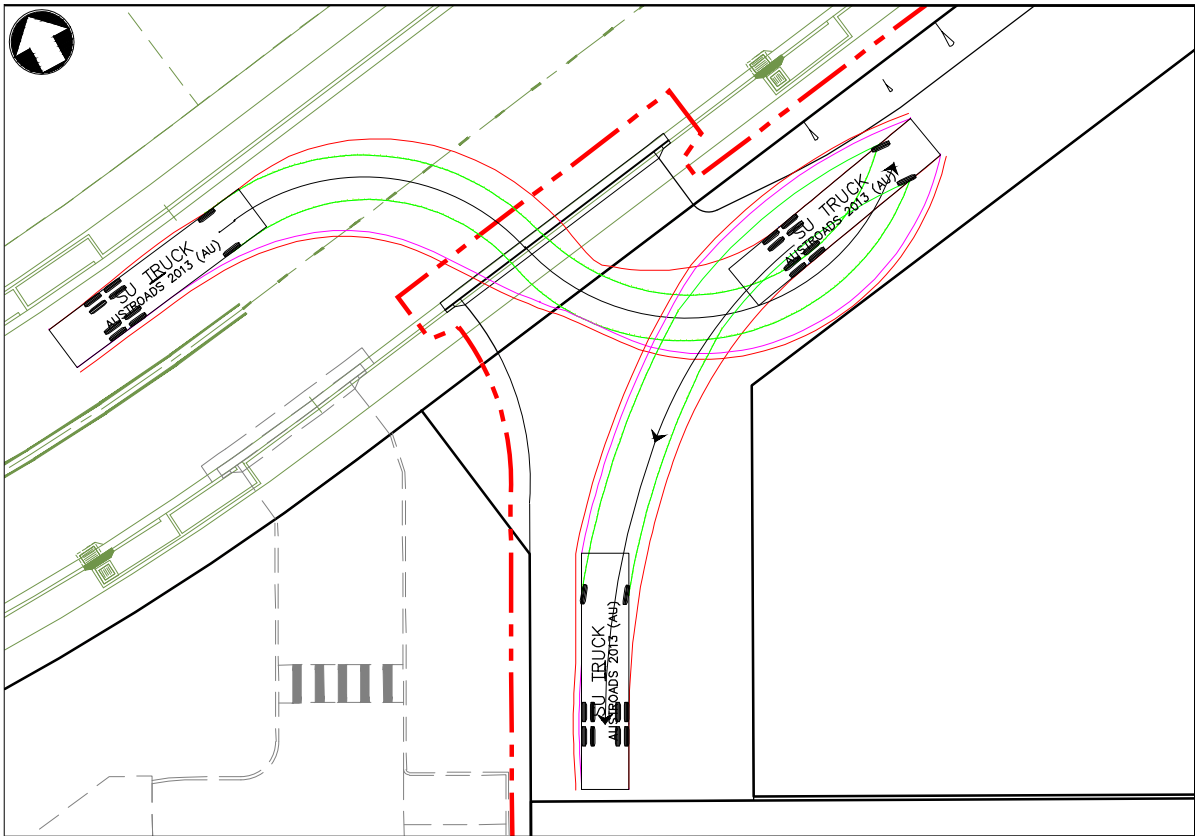
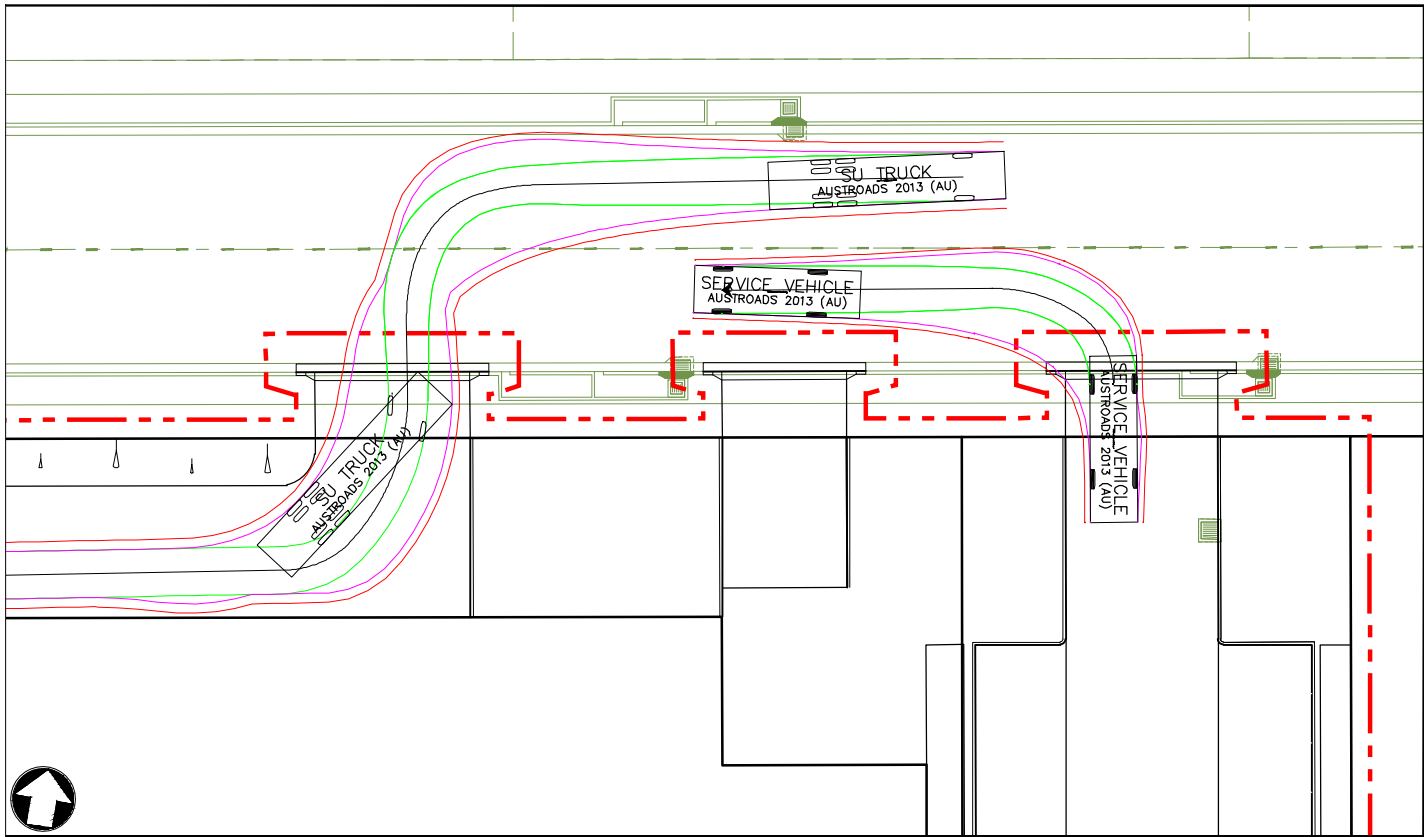
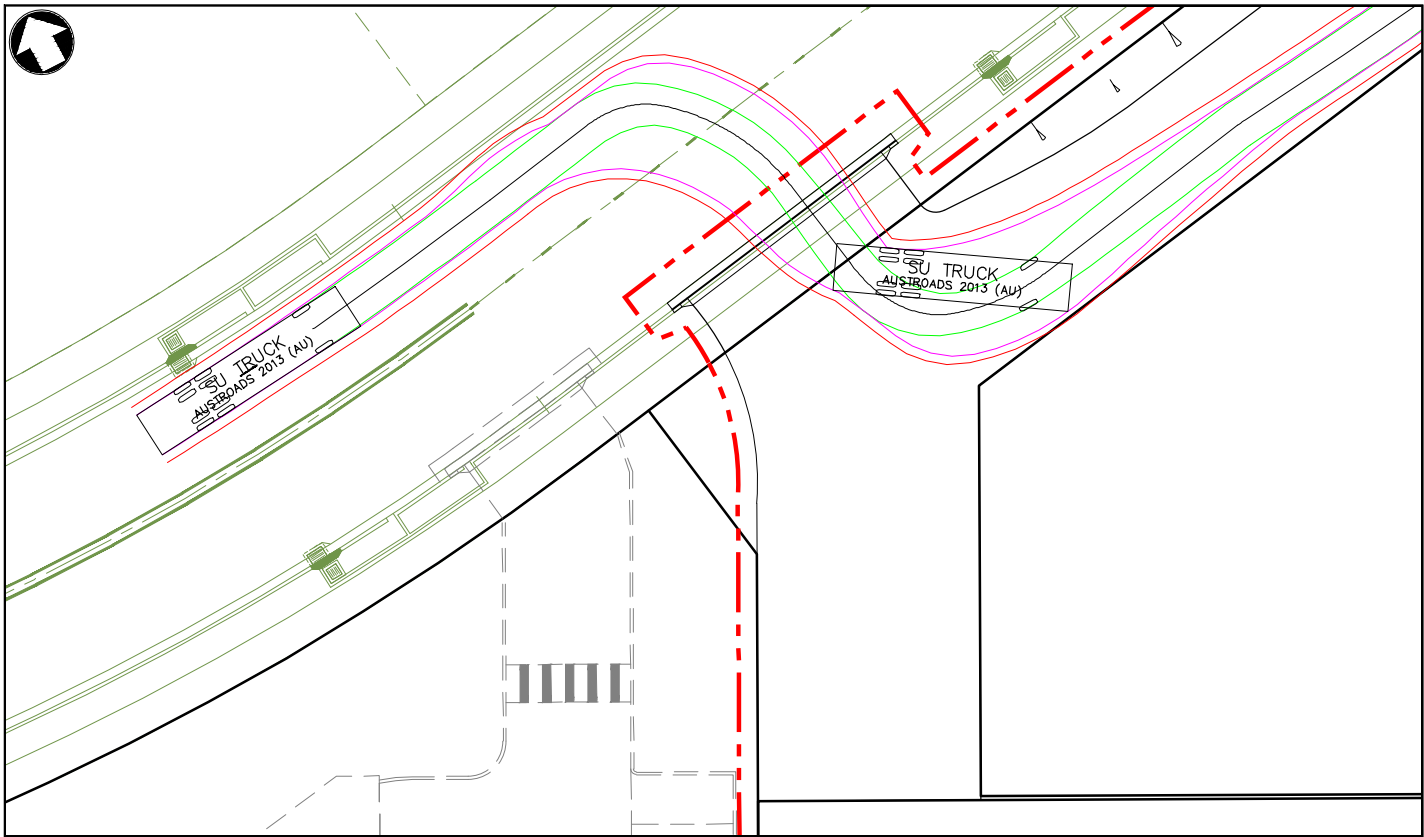
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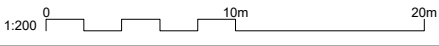
Turning Path Plan
Sheet 2

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A. Singh	Approved	J. Gilligan
Scale at A1	1:200	Status	PRE
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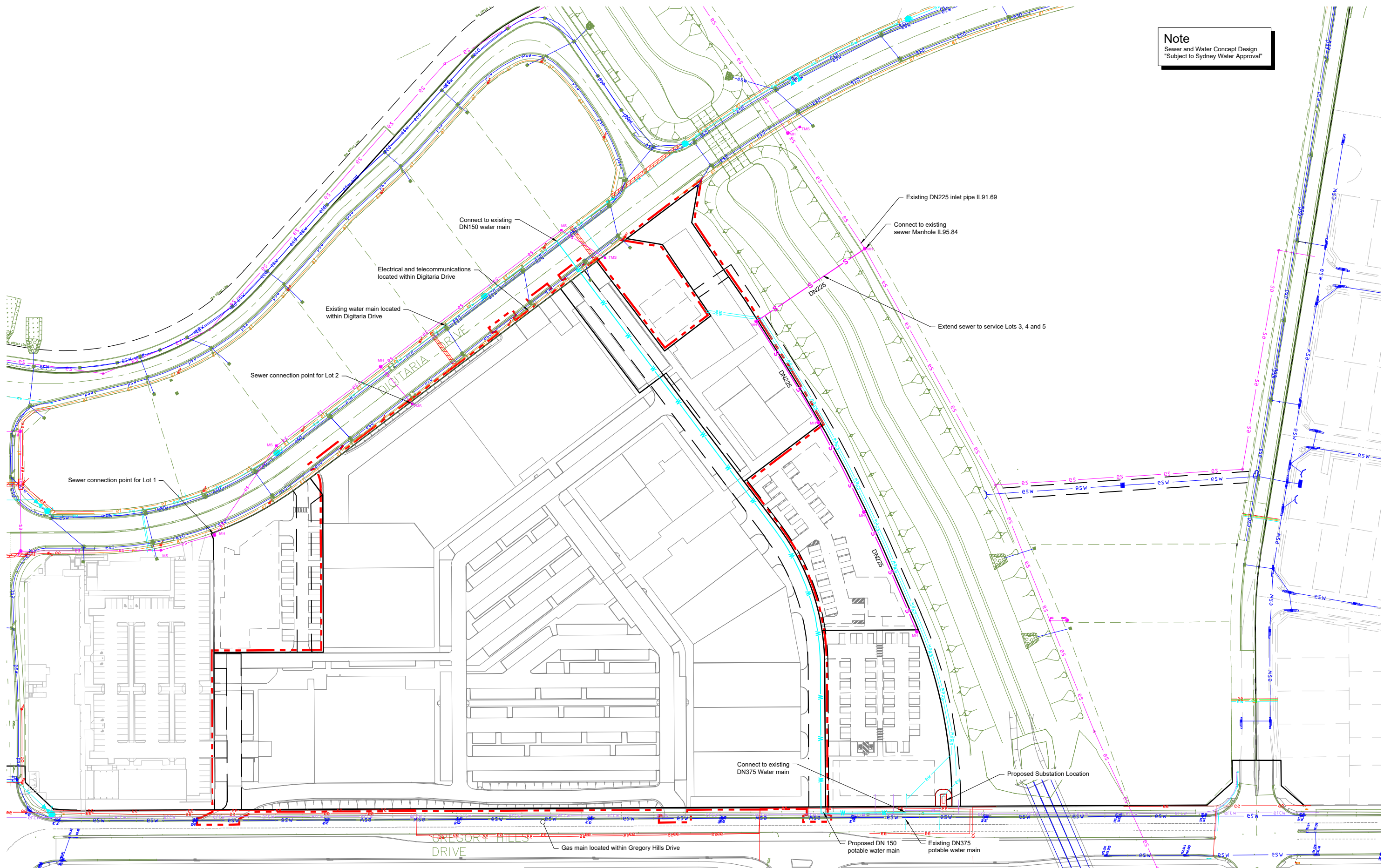
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**Turning Path Plan
Sheet 3**

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Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A. Singh	Approved	J. Gilligan
Scale at A1	1:200	Status	PRE
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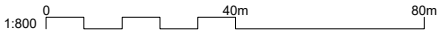
Note
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Subject to Sydney Water Approval



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Concept Servicing Strategy

Designed	P.Cavanagh	Eng check	S. Reilly
Drawn	M. Mcrae	Coordination	S. Reilly
Dwg check	A. Singh	Approved	J. Gilligan
Scale at A1	1:800	Status	PRE
Drawing Number	MMD-369626-C-DR-CB-DA-0901		
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